

JULY 22, 1944

Railway Age

Founded in 1856

Forward Planning for



GENERAL MOTORS
LOCOMOTIVES

Forward Marching

LIKE all great military movements which are planned so far in advance, the American railroads are now planning for the Peace time ahead... To obtain the ultimate in modern rail motive power, many railroads have explored the superiorities of General Motors Diesel Freight Locomotives, with the result that, as of June 1, 1944, fourteen railroads were operating General Motors Freight Diesels — thirteen of these

roads have reorders on file — eight new railroads have freight Diesels on order — ten railroads have GM Triple Diesel Service — Freight — Passenger — Switcher... Typical, the Baltimore and Ohio, the first eastern railroad to adopt Diesel passenger locomotives, now leads the East with 85 General Motors Diesel Locomotive Units totaling 108,000 horsepower in all classes of service with more to follow.

★ BACK THE INVASIONS — BUY MORE WAR BONDS ★

*A Bright Spot
on the Production front*

MT. VERNON CARS

The Mt. Vernon car plant is located in an area of adequate labor supply (Group III). This fact, together with one of the most completely-equipped modern car shops in the country, and the Mt. Vernon tradition of quality workmanship, are important factors to consider under present day conditions.

MT. VERNON CAR DIVISION:
Complete Line of Freight Cars
LOCOMOTIVE DIVISION:
Diesel, Diesel-Electric, Electric, Steam,
and Fireless Steam Locomotives.
PROCESS EQUIPMENT DIVISION:
Complete Line of Chemical, Food, and
Petroleum Refinery Equipment.
QUIMBY PUMP DIVISION:
Screw, Rotex, Centrifugal, Chemical Pumps.
ORDNANCE DIVISION:
Projectiles, Heavy Forgings, Breach Blocks,
Winches.

PORTER
*"Better Built"
Equipment*
Established 1866

MT. VERNON CAR MFG. CO.
Division of **H. K. PORTER COMPANY, Inc.**

PITTSBURGH, PA. • BLAIRSVILLE, PA. • MT. VERNON, ILL. • NEWARK, N. J. • NEW BRUNSWICK, N. J.

**A TON OF FINISHED
STEEL REQUIRES**



ORE—2,800 LBS.



COAL—1,600 LBS.



LIMESTONE—825 LBS.



AIR—16,000 LBS.



WATER—480,000 LBS.

*Some job to make
a ton of steel*

But America Makes Millions of Tons a Year



Have at hand—2,800 pounds of iron ore; 16,000 pounds of air; 480,000 pounds of water; 87,000 cubic feet of gas; 1,600 pounds of coal; 825 pounds of limestone; 4,300 pounds of steam; 1,500 pounds of steel scrap—also fluxes, alloys, refractories, electric power, sulphuric acid, muriatic acid, fuel oil, pitch . . . and furnaces capable of developing 27,000,000 B. t. u. for each ton of steel to be shipped.

Making a ton of steel is complex in method and equipment, as well as in the number, and quality of ingredients, supplies and utilities.

At Inland these complex processes are controlled by a large staff of metallurgists working in laboratories and in the plants, and by specially trained engineers who constantly investigate and design new mechanical methods and equipment. Basic ingredients—ore, limestone, coal and fluorspar—come from Inland owned mines and quarries—selected and blended to meet the needs of critical steelmakers. All other supplies are obtained under rigid specifications.

The Inland "know how" for making each ton of steel is giving America quality steels for Victory—later it will help supply the quality steels for America at peace.

INLAND STEEL COMPANY

38 S. Dearborn St., Chicago 3, Illinois

Cincinnati • Detroit • Kansas City • Milwaukee • New York • St. Louis • St. Paul





THESE, TOO, ARE EAGLES...

America and the world can never forget the tremendous contribution Trucks and Truckers have made in giving the United Nations the undisputed air supremacy enjoyed today on every front ★ That the great majority of this essential hauling was accomplished by an overburdened, undermanned Motor Transport Industry speaks volumes not only for the men who engineered the task but for the ruggedness of American equipment ★ Although there has never been a question of their ability to come through, it has been an honor for Bendix-Westinghouse Air Brakes to have served, both men and equipment, so faithfully throughout this emergency. In this

service, both civil and military, the safe, dependable, economic performance of this "World Standard of Safety" was never more conclusively proven ★ If you have a control problem, may we suggest that there is no better time to see your Bendix-Westinghouse Distributor who will be happy to confer with you, without obligation. It's a coast-to-coast service maintained in the interest of better, safer, more economical transportation, by the two greatest names in braking.

BENDIX-WESTINGHOUSE AUTOMOTIVE
AIR BRAKE COMPANY . . . ELYRIA, OHIO

Bendix-Westinghouse

AIR BRAKES

AND PNEUMATIC CONTROL DEVICES



IT IS SIGNIFICANT THAT AMERICA'S FINEST MOTOR TRUCK FLEETS ARE EQUIPPED WITH BENDIX-WESTINGHOUSE AIR BRAKES



DRAFTING BOARDS ARE LOADED with plans to install proportioning feeders

Planning automatic water treatment plants that will meet the operating requirements of each railroad is 'round-the-clock work for Dearborn engineers these days.

Railroads now using Dearborn proportioners find water output can be increased 4 or 5 times normal capacity without changes or additions to equipment or without damaging effect upon the equipment already in use.

Peacetime operating will not tolerate high water costs

As Dearborn proportioners make possible the use of inexpensive auxiliary chemicals in combination with a Dearborn formula, water treatment costs are lower than with any type of "boiler compound" which includes a large proportion of soda ash as one of its chemicals.

Call us for details if your plan to improve your water treating facilities is not already on the Dearborn drafting board in our engineering department.

DEARBORN CHEMICAL COMPANY

310 S. Michigan Ave., Chicago 4 807-15 Mateo St., Los Angeles
205 E. 42nd St., New York 2454 Dundas St., West, Toronto



Dearborn
TRADE MARK REGISTERED

**BOILER WATER
TREATMENT
AND SERVICE**



NICKEL AIDS THE COMMUNICATIONS INDUSTRY

to KEEP 'EM IN TOUCH!

In the tradition of Morse and Bell and Marconi, the communications engineer carries on today.

His work, always valuable, now is vital.

No military campaign proceeds without it. The close teamwork between air, ground, and sea arms is possible only through instruments and equipment that keep them in touch though scattered throughout the four quarters of the globe.

And the vastly increased pace of modern war production brings with it increased use of every home-front circuit, line and wave-length.

All branches of the communications industry...telephone, telegraph, radio...are meeting the tremendous demand for their products. In war, communication engineers are taking advantage of their long peacetime experience with metals and alloys.

Time and time again this experience has shown them that a little Nickel goes a long way in improving other metals.

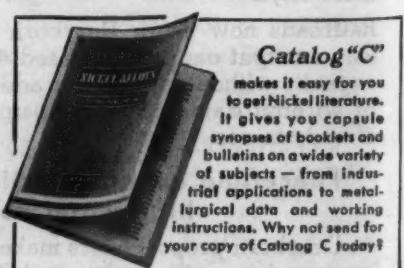
So now, when the dependability of what this industry makes is of supreme importance to the Nation, it favors more than ever the use of Nickel.

In repeaters, relays, magnetos, loading coils, transformers, loud-speakers and modern cables...even in the molds that form plastic radio parts...they call upon Nickel and its alloys for several unique advantages.

When other metals lack toughness, Nickel often supplies it. When they lack strength and fatigue resistance or corrode too easily, adding Nickel provides the needed qualities. Under abrasion, wear, shock and stress metals perform better with Nickel than without.

In the communications industry, as in many another, the knowledge, experi-

ence and cooperation of our staff has been at the disposal of technical men. Whatever your industry may be...if you want help in the selection, fabrication, and heat treatment of alloys...similar counsel and data are at your service.



* Nickel *

THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall St., New York 5, N. Y.



OXY-ACETYLENE FLAME-HARDENING *- Protects Parts at the Points of Wear*

• Parts that receive abrasive wear can be flame-hardened at the points of wear to give longer service life, even though the surfaces to be treated are recessed like the slots in the guide illustrated above. Here, an Oxweld head hardens one horizontal and two vertical surfaces simultaneously, imparting a hard case without affecting the tough core of the steel.

Parts too large to be handled economically by any other process can be flame-hardened by Oxweld's method at exactly the points where wear occurs... and without distortion.



Oxweld has helped to develop successful flame-hardening procedures and other oxy-acetylene techniques. An Oxweld representative will be glad to help you apply these procedures in your shop.

THE OXWELD RAILROAD SERVICE COMPANY

Unit of Union Carbide and Carbon Corporation



Carbide and Carbon Building Chicago and New York



SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

The word "Oxweld" is a registered trade-mark of a Unit of Union Carbide and Carbon Corporation.



it may look a bit

QUAINT

But it served
a very real need
in its day!



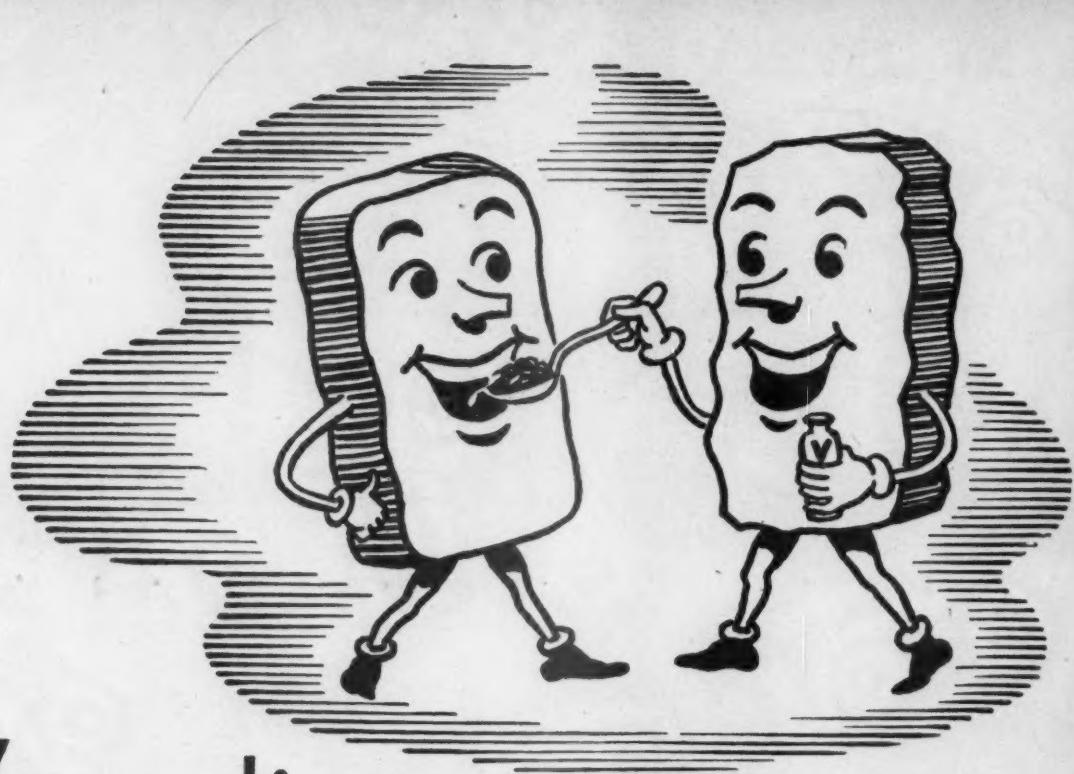
THE instinct for constantly developing new and better types of railroad rolling stock, so characteristic of our American railroads, has not been confined entirely to this country. The quaint old canteen car, shown herewith, was designed and built by the Compagnie Generale Transatlantique for the use of immigrants to the United States from European countries in the early 1880's.

In the 97 years that A.C.F. and its predecessor companies have been privileged to cooperate with the railroads in the creation of new types of rolling stock to meet each new need, we have seen great changes in car design and construction. But changes even more far-reaching are planned for the years immediately following the war.

For our own part, we have designed new A.C.F. equipment of every type — safer, smoother riding, better lighted, better ventilated, and more luxurious. At every point in the design of this new rolling stock, A.C.F. has been guided by two ruling considerations; make railroad travel *more attractive* to the passenger; make the operation of these new cars *more profitable* to their owners.

a.c.f. AMERICAN CAR
and FOUNDRY Company

New York • Chicago • St. Louis • Cleveland • Washington • Philadelphia • Pittsburgh • St. Paul • San Francisco



Vanadium— a Tonic for Steel

● Perhaps you have a difficult specification to meet in cast, forged, or rolled steel...

Perhaps your welds do not meet the specifications for bend tests and freedom from cracking...

Perhaps you need a higher elastic limit or more toughness for higher impact resistance...

If you do, you should try a small percentage of vanadium (0.05 to 0.10 per cent) in your steel. The effects of this slight addition of vanadium are remarkable in increasing the strength and toughness of steel.

For example: The addition of sufficient vanadium to welding rod coatings to introduce 0.10 per cent into the weld metal has increased the tensile strength of the welds several thousand pounds per square inch without lowering the ductility.

You can get more information about the use of vanadium for improved physical properties of steel by writing for the booklet "Vanadium in Steel and Iron—A Review" or by getting in touch with the metallurgical engineer at your nearest Electromet office.

BUY UNITED STATES WAR BONDS AND STAMPS

ELECTRO METALLURGICAL COMPANY

Unit of Union Carbide and Carbon Corporation

30 East 42nd Street  New York 17, N. Y.

In Canada: Electro Metallurgical Company of Canada, Limited, Welland, Ontario

Electromet
Trade Mark
Ferro-Alloys & Metals

Why and How to use

PORUS-KROME



Official U. S. Navy Photograph

Official U. S. Navy Photograph

Why . . .

- ... reduces wear and corrosion
- ... multiplies cylinder life 4 to 20 times
- ... increases ring life 3 to 5 times
- ... improves lubrication
- ... reduces risk of piston seizure
- ... greatly increases engine reliability

How . . .

- ... by having cylinders or liners processed in one of the three Van der Horst plants
- ... by license agreement to engine builders to use the process in their own plants



Write today for full and detailed information on how PORUS-KROME will make engines more reliable and will thereby reduce maintenance and operating costs for the user.

PORUS - KROME

Good for the Life of your Engines

VAN DER HORST CORPORATION OF AMERICA

AN AFFILIATE OF DRESSER INDUSTRIES

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CLEVELAND 11 - OHIO





STEEL— for the railroads

Large Diversified Stocks—Quick Shipment

When you need any kind of steel—quickly—get in touch with your nearby Ryerson plant. Stocks on hand include over 10,000 different kinds, shapes and sizes—plus facilities for shearing, punching, flame cutting or otherwise preparing steel to your exact specifications. Our engineers and metallurgists will gladly work with you on any problem of steel supply, application or fabrication. Eleven convenient plants provide practically next-door delivery service. So call on Ryerson in any emergency, or use our stocks to supplement your inventory.

Joseph T. Ryerson & Son, Inc., Steel-Service plants: Chicago, Milwaukee, Detroit, St. Louis, Cincinnati, Cleveland, Pittsburgh, Philadelphia, Buffalo, New York, Boston.

Ryerson Service for Railroads Includes:

Carbon Steel Bars, hot rolled and cold finished.

Structural Steels of all standard shapes and sizes.

Plates of all kinds, also Inland 4-Way Floor Plates.

Alloy Steels in carburizing, medium and high hardening grades.

Sheet Steel: 17 different types including Allegheny Stainless

Mechanical Tubing for all applications.

Boiler Tubing: a wide range of sizes.

RYERSON MACHINERY AND TOOLS

In addition to our equipment for railroad spring shops and flue shops, we offer hundreds of other types of metal-working machinery and small tools. We will be glad to quote on any of your machinery requirements. Send for our Catalog No. 44.



RYERSON STEEL-SERVICE



HOW Pan American Airways PACKS 2,100 HOURS INTO A DAY

THE minute the giant transatlantic Pan American Clippers get back to their base, they get an exhaustive going over.

It's thorough. And it's fast.

A swarm of mechanics, working in eight-hour shifts, get the job done in 60 hours — 2,100 man-hours a day.

What helps this swift turn-around are Elastic Stop Nuts. These nuts have been on every Pan American Clipper since 1928. They are on motors, mounts, wings and countless structural parts.

Particularly timesaving are the Anchor Nuts which permit smooth blind mounting. Hundreds of these fasten the covers for inspection openings. These Anchor Nuts* are an Esna development and are used by millions in all kinds of airplanes.

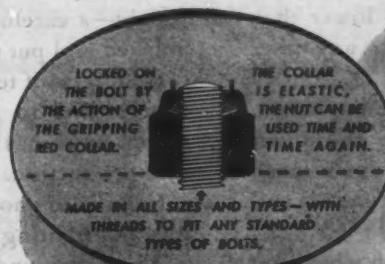
Elastic Stop Nuts lock tight and fast without any auxiliary devices. There's no time wasted in fussing to get them off and back on again.

They lock because of the elastic collar in the top. This collar squeezes in between the bolt threads. It's compressed tight. The nut can't turn. It can't wiggle. It can't shake loose. And you can take it off and

put it on again many times and it still locks.

Every fastened product can be better because of these nuts — can be safer, tighter, quieter, and longer lasting.

So if you have a fastening problem now, or see one ahead, let us show you how these red-collared Esna Nuts can help. Our engineers are ready to consult with you and recommend the appropriate nut.

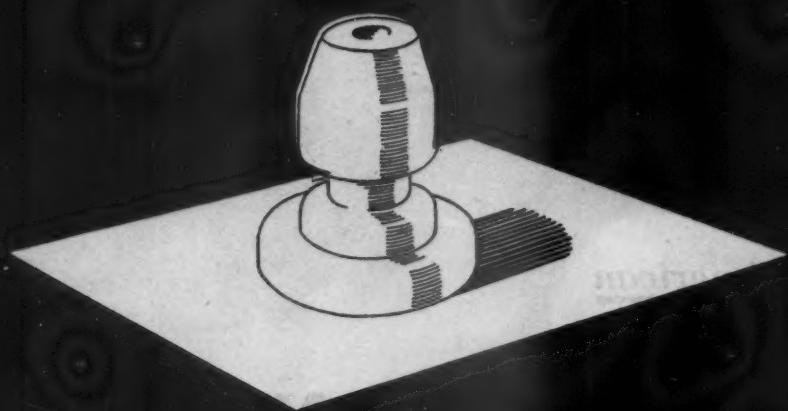


The Clippers' powerful engines are equipped with Elastic Stop Nuts. Overhauling is simplified by the absence of pins, washers, or other auxiliaries.



ESNA
TRADE MARK OF
ELASTIC STOP NUT CORPORATION
OF AMERICA
ELASTIC STOP NUTS
Lock fast to make things last
UNION, NEW JERSEY AND
LINCOLN, NEBRASKA

BETTER STEEL CASTINGS THROUGH RESEARCH



Inside Picture—without X-RAYS

By the casting process, steel can be formed into an infinite variety of shapes, at a cost much lower than many of these shapes could be produced by any other method.

Both outside shape and inside shape are important. Making the sand cores, which shape the inner openings of the finished casting and eliminate much boring and drilling, has come to be a very exact and scientifically controlled job.

Research has taught the steel foundryman what kind of sand to use for his cores, what binders and core oils produce proper results, how to shape the cores, which are actually castings made of sand, how to bake them and set them in place.

There may be many different kinds and shapes of

cores used in a single mold, but only one result is sought—a carefully-shaped mass of steel, ready to be finished and put to work in its end-use job.

Hundreds of technical men have made thousands of experiments to achieve these practical results. Research work has gone on, right through the stress of war production.

It has paid enormous dividends, for it has helped to give our fighting men better tools to fight with.

These dividends will be continued after the war, for better steel castings will be important factors in producing better tools for living and working in a world of peace.

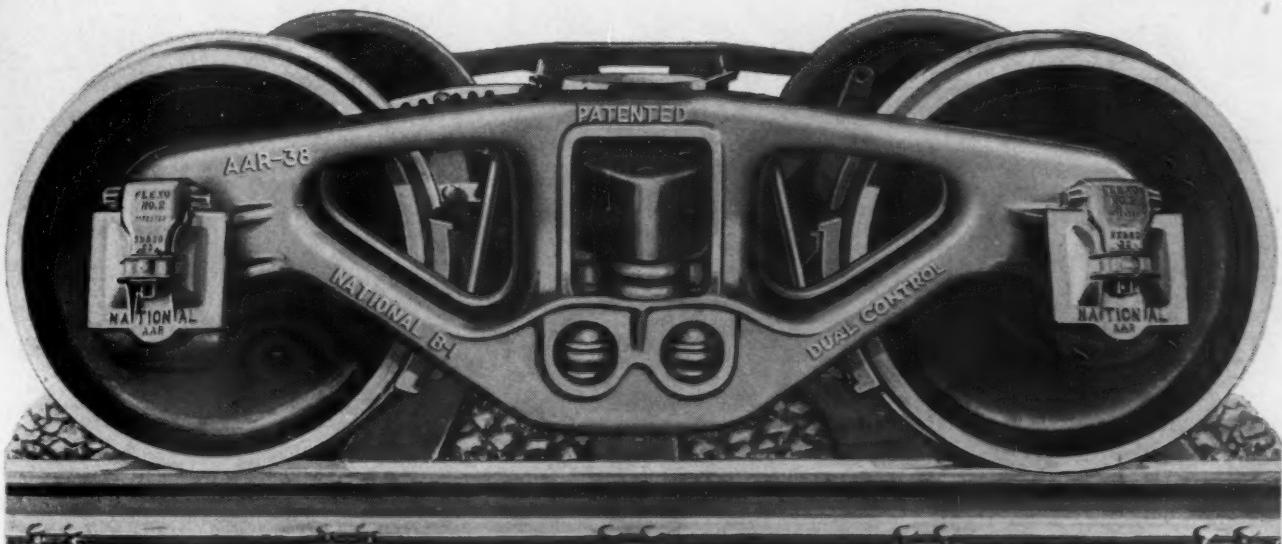
Published by the Steel Founders' Society of America, to tell you about its organized Research Program.

MODERNIZE AND IMPROVE YOUR PRODUCT WITH

STEEL CASTINGS

Built-in Controls make B-1 an Easier Riding Truck

National B-1 Trucks with Dual Control are protecting cars and lading throughout the United States and Canada. Built-in controls and safety features allow cars with B-1 Trucks to be speeded up with safety.



National B-1 Truck with Dual Control

"Spring bounce" controlled . . . Self squaring

Springs protected . . . Quickest Wheel Change

No Spring Plank . . . No Spring Plates required

Less number of parts . . . Lower Maintenance Cost

NATIONAL MALLEABLE AND STEEL CASTINGS CO.

General Offices: CLEVELAND, OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco

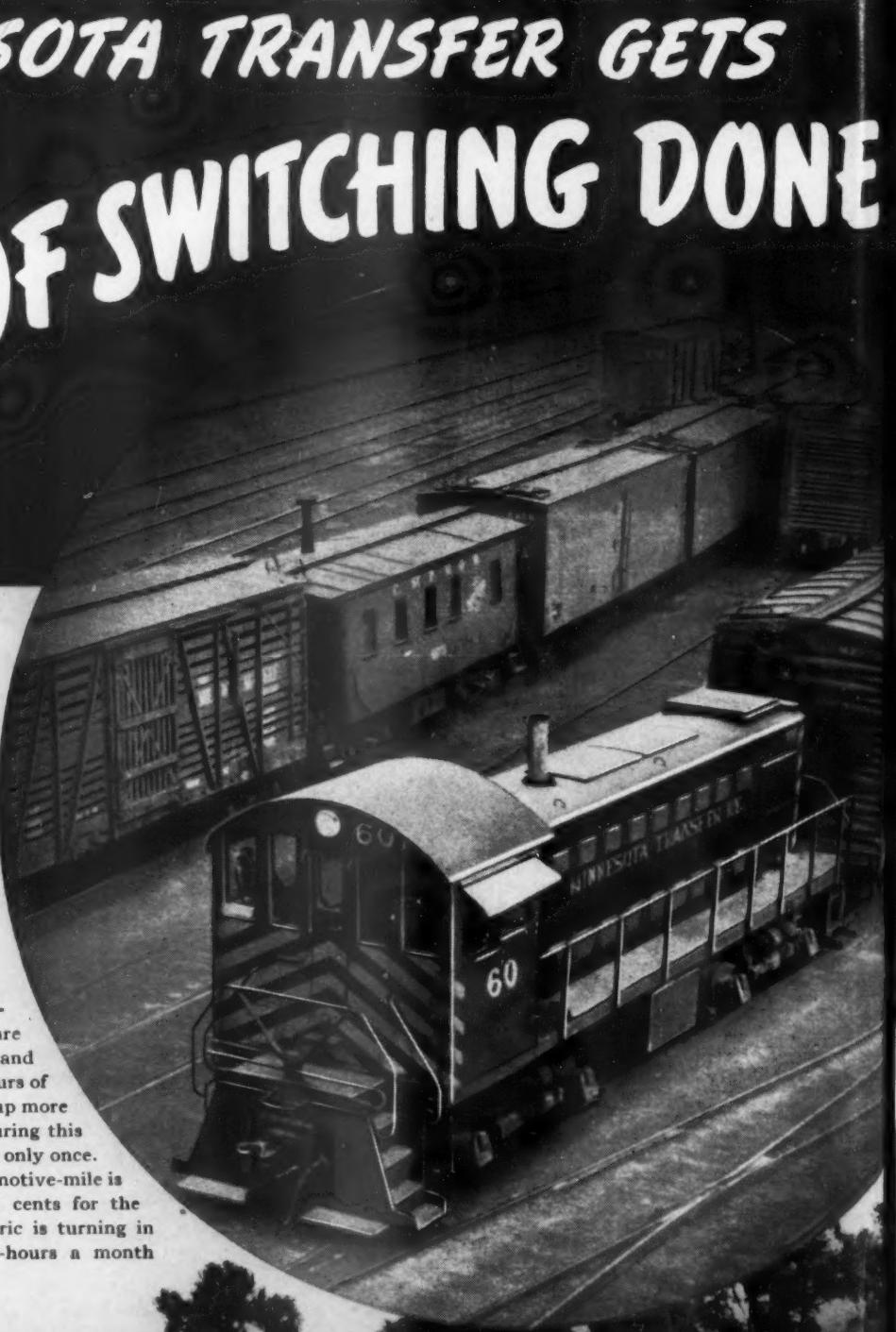
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Canadian Representatives: RAILWAY AND POWER ENGINEERING CORPORATION, LTD., Toronto and Montreal

MINNESOTA TRANSFER GETS 2 $\frac{2}{3}$ OF SWITCHING DONE W

40,000
LOCOMOTIVE-HOURS
ON ONE OVERHAUL

After five years of almost continuous operation, Minnesota Transfer's first diesel-electrics—three 1000-hp Alco-G.E. units—are still working full time, smoothly and economically. Averaging 21.8 hours of work a day, each unit has piled up more than 40,000 locomotive-hours during this period—and has been overhauled only once. Their maintenance cost per locomotive-mile is 5.1 cents, compared with 11.6 cents for the steamers—and each diesel-electric is turning in four times as many locomotive-hours a month as each steamer.



AMERICAN LOCOMOTIVE

E WITH 1/3 OF MOTIVE POWER

MORE PROOF THAT DIESEL-ELECTRICS DO MORE WORK AT LESS COST

OPERATING RECORD OF 6 ALCO-G.E. DIESEL-ELECTRICS
on Minnesota Transfer

	ALCO-G.E. DIESEL-ELECTRICS	%	STEAMERS	%
Number of locomotives	6	30	14	70
Cars switched per month	40,000	67	20,000	33
Locomotive-hours per month	4000	67	2000	33
Number of tricks per month	72	72	28	28
Transfer runs, daily	4-5		none	
Industrial switching	some		none	
Fuel cost per loco.-hour	\$0.60		\$2.60	
Maintenance cost per loco.-mile	5.1¢		11.6¢	

trains over a profile which has a maximum grade of .75 per cent.

THE FUEL CONSUMPTION of each diesel-electric, including the three 1000-hp units that have been in service since 1939, is averaging \$.60 an hour—compared with \$2.60 an hour for each of the 14 steamers. Every other day, during crew changes and lunch periods, the diesel-electrics are refueled and serviced. Round-house expense is averaging approximately one-fifth that of the steamers.

THE SAVINGS ACCOMPLISHED at Minnesota Transfer by Alco-G.E. diesel-electrics indicate how effectively you can utilize these locomotives to strengthen your future competitive position. Our engineers will welcome an opportunity to survey your system. And because we build all three types of motive power—diesel-electric, electric, and steam—we can recommend the one that is economically best suited to your needs.

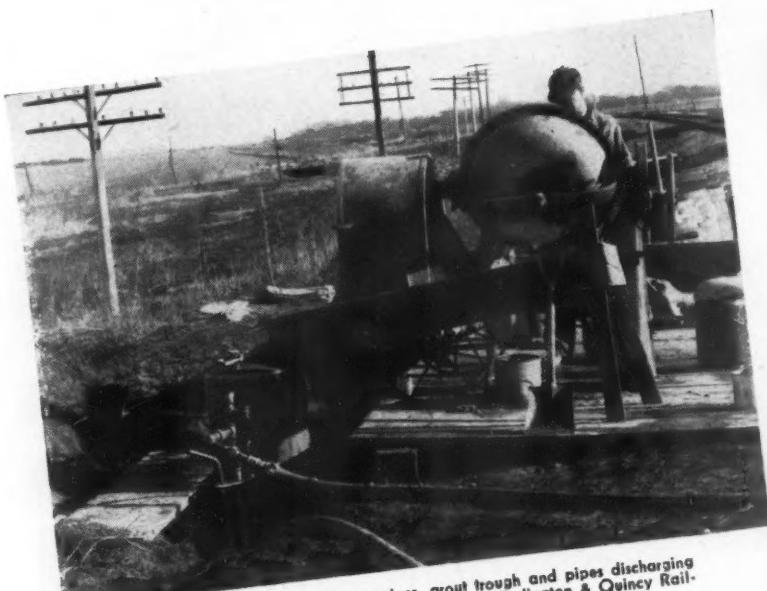
INTO Minnesota Transfer's yards at St. Paul, nine great railroad systems pour an average of 60,000 cars a month that require 6000 hours of switching. There are 20 locomotives—14 steamers and six Alco-G.E. diesel-electrics—to do the job. The diesel-electrics, 30 per cent of the motive power, account for 67 per cent of the work by furnishing 4000 of the 6000 locomotive-hours. Their extremely high availability permits round-the-clock operation seven days a week. That's why they can handle 72 of the 100 tricks a month.

IN ADDITION TO THEIR YARD WORK, the diesel-electrics serve the terminal needs of the Twin Cities industrial area and make four or five daily transfer runs. On one of them, a 13-mile run, a 1000-hp unit easily hauls 2000-ton

and GENERAL ELECTRIC

BUY
WAR
BONDS

Equipment and Methods for Pressure Grouting Track



Equipment, including small tilting mixer, grout trough and pipes discharging into commercial pneumatic grout unit on Chicago, Burlington & Quincy Railroad at Salem, Neb.



Injection points in place on Wabash Railroad at Thurman, Ind. Grout hose is attached to point in foreground.

Stabilizing roadbeds by injections of portland cement grout has passed the experimental stage. Years of service on major railroads have demonstrated that pressure grouting gives positive results in eliminating water pockets and effects consistent saving in maintenance.

Equipment and methods to insure satisfactory pressure grouting have been developed by the railroads and equipment manufacturers. Work is done by regular railroad gangs with no interruption of war traffic.

Write for illustrated information sheet, "Stabilizing Railroad Track by Pressure Grouting." Mailed free in United States and Canada.



Grout being injected through pipe in foreground, travels under tie bed and blows out through uncapped injection point six feet away. Operation is on Baltimore & Ohio Railroad at Niles Junction, Ohio.

PORLAND CEMENT ASSOCIATION

Dept. 7d-26, 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

BUY MORE
WAR BONDS

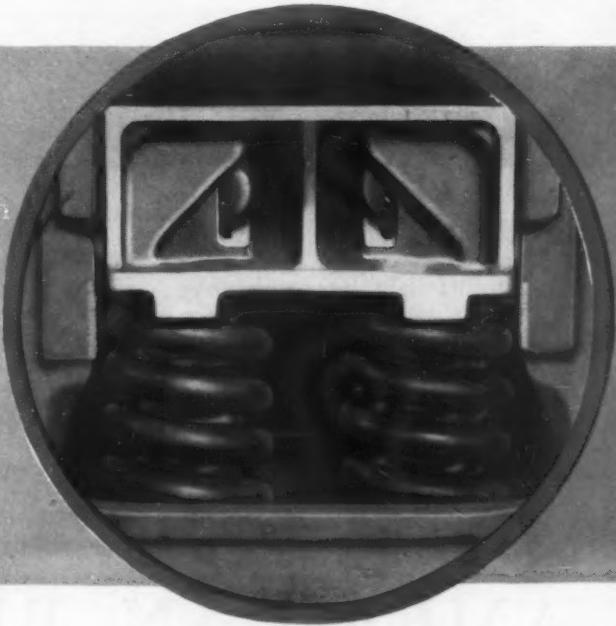
THE TRUCK FOR TODAY'S NEED . . . TOMORROW'S SPEED!



**CUT WEAR and TEAR
and ROADBED CARE!**

NO SPRING PLATES
NO SPRING PLANKS

Because the A. S. F. Ride-Control Truck (A-3) prevents destructive harmonic oscillation, no heavy rhythmic pounding is transferred from rail to roadbed. Rail-end batter, too, is reduced. And, since lateral truck motion is also controlled, cars ride evenly—without the swaying that otherwise exerts damaging pressures first on one side of the roadbed, then on the other. In addition, the Ride-Control system of balanced friction pressures prevents the roadbed wear often attributed to trucks that tend to go out of square in rounding a curve. This truck not only cushions the lading that it carries but is easy on rail equipment and roadbed as well.



AMERICAN STEEL FOUNDRIES
CHICAGO

MINT-MARK OF  FINE CAST STEEL



Short Cuts to quicker hauls

AMERICAN railroads now are carrying nearly twice the gross ton-miles of freight they were hauling three years ago . . . and they are breaking all records in passenger traffic. This amazing wartime performance is neither a miracle nor a military secret. It is the result of hard work, skillful coordination, careful maintenance — and a far-sighted engineering program on the part of management that prepared the railroads for today's emergency.

A dominant feature in this long-range planning has been the erection of modern bridges to shorten circuitous routes, eliminate flood hazards, and improve traffic integration. How fortunate it is for our nation's war effort that many of these projects were completed before Pearl Harbor!

American Bridge has built many of these strategic structures. For example, the massive high-level bridge above is the main link in an impor-

tant cutoff which shortened trackage by $3\frac{1}{2}$ miles and kept it clear of flash floods. The double-deck cantilever bridge shown was erected as part of railroad and highway relocations made necessary by a huge water-power and irrigation project. The bascule bridge replaced an old swing span, providing a wider navigation channel and speeding both rail and river traffic because of a sharp reduction in opening and closing time.

We are glad to have had a part in projects which contribute so greatly to the wartime usefulness of America's railroads. And we look forward to the time of peace when all our resources and facilities will again stand ready to serve the railroads in meeting their post-war tasks and responsibilities.

AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.



Baltimore • Boston • Chicago • Cincinnati • Cleveland • Denver • Detroit • Duluth
Minneapolis • New York • Philadelphia • St. Louis

Columbia Steel Company, San Francisco, Pacific Coast Distributors

United States Steel Export Company, New York

UNITED STATES STEEL



THERE'S NO STOPPING THEM!

THE trains roll by full speed and maintenance of way goes on without interruption when "Caterpillar" Diesel Tractors tackle off-track jobs. No side-tracking. No "slow orders." None of the loss of time encountered with work train operation.

Husky "Caterpillar" equipment, operating independently of rail schedules and traffic, not only gets the work done quickly, but economically, too. Using small quantities of low-cost fuel, these units show

remarkable performance in building shoulders, ditching, back-sloping, relocating track, cutting grades and many other MW operations.

"Caterpillar" Diesel Tractors can be equipped with bulldozer, crane, scraper, winch, shovel or snow-plow. With but a single operator, one "Caterpillar" Diesel can often accomplish in a given time as much as an entire work train, without any interference to war-swelled traffic on the rails.

• This "Caterpillar" Diesel D8 Tractor, equipped with a bulldozer, is shown spreading, leveling and sloping banks along the Illinois Central Railroad, going right ahead with its job while a train passes the operation.

Many convincing case histories of efficiency, flexibility and economy have been turned in by "Caterpillar" Diesels on railroads all over the country. If you're interested in this modern method of maintenance, write for facts and figures.

CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

CATERPILLAR DIESEL

TRACTORS • ENGINES AND ELECTRIC SETS • EARTH-MOVING MACHINERY



Onward with "The Eagle"



● In its daily 477 mile run between St. Louis and Omaha, the "Missouri River Eagle" of the Missouri Pacific Lines has established an outstanding record carrying capacity passenger loads. Few trains can equal the five year 'on time' performance of these splendid trains. Many features of modern railroading on the progressive Missouri Pacific Railroad make these records possible.

Playing an important part is the vital

factor of lubrication. Sinclair Gascon Diesel Oil is used to lubricate the Diesels of the "Missouri River Eagles." In wide service this oil has made a high record for performance and economy.

Gascon, through inherent solvent action, keeps rings and pistons clean. Its wear-prevention qualities hold down costly replacements.

For counsel on lubrication problems Sinclair engineers are at your service.

SINCLAIR RAILROAD LUBRICANTS

SINCLAIR REFINING COMPANY, RAILWAY SALES, NEW YORK • CHICAGO • SAINT LOUIS • HOUSTON

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway-Age Gazette. Name Registered in U. S. Patent Office

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The Week at a Glance

TRACK DETERIORATION: How much faster does the useful life in a piece of track disappear under heavy traffic? A credible answer to that question would be useful alike to executives, engineering officers, and financial analysts. An editorial in this issue essays at least an approach to such a calculation—reminding us of the Yager formula which estimates the deterioration from added traffic at 30 per cent as much as the increase. This computation was developed, however, from World War I experience when, as memory serves, federal operation was getting the trains over the road scarcely as fast as much bigger engines are moving them today; and destructive effect mounts as the square of the speed. The characteristics of recent traffic have not been helpful to ballast, either. The analysis concludes that such optimism as can be found on the present and developing state of the track structure may deserve some critical scrutiny.

WHAT BOOKS SAY: Text and reference books are as important a source of public opinion toward the railroads as the daily press—and, if their information is inadequate, erroneous or unfriendly, may be even more harmful, because their effect is repetitive and persistent. An editorial herein suggests that this public relations mechanism is not today especially productive of good-will toward the railroads—and for a cause not unduly difficult to correct, namely, that the railroads, for no very good reason to the contrary, have few close contacts with social scientists who produce such literature. Wouldn't better understanding between railroad people and such scholars be as mutually helpful as closer relations between the carriers and the press have been?

BULL'S EYE FORECASTS: The Shippers' Advisory Boards' 1943 estimates of the volume of traffic were right on the bull's eye, lacking only 0.01 per cent of perfection on a nation-wide basis. Some individual boards, of course, hit the mark a little better than others—but those which were low offset the high ones to give an overall average of an accuracy which the Car Service Division, in an excess of modesty, terms merely "noteworthy." The score by districts is tabulated in the news pages.

STRAWS IN BRITISH WIND: Two significant developments, suggestive of tendencies now at work which are shaping the future of the transportation industry in the only large country except the United States where private ownership is still predominant, are reported in our news pages. One of these items recounts an effort being made to organize the officers of the British railways into a "guild"—which would not be a union in the usual sense, but would afford a collective means for protection of the interests of this group in the post-war period. Another report concerns the all-out program for transport socialization prepared by a committee of the Labor Party for presentation at the coming annual conference of that powerful political aggregation. The rejection of

private ownership in favor of socialism for air transport by our good neighbor to the North and the dominance by government as the senior partner of air transport in this country may well be other feathers in the same totalitarian breeze. And yet, with an abundance of such monitory omens, business leadership in this country still "resolves" for free enterprise while favoring continued and enlarged government transport outlays, obviously tending to make private ownership of transport facilities progressively less attractive.

RAILROADING IN IRAN: Nowhere else in the world are there such a set of circumstances to make railroading difficult as in Iran. A less determined and resourceful group of men than the American Army railroaders would call them insuperable, for large-scale performance. But the boys are making the grade (in the literal as well as the abstract sense of the term). Two Military Railway Service officers, in an illustrated article on page 152, report on the physical, operating, climatic, labor, and equipment conditions which the service has surmounted in order to get to Russia the munitions, which Soviet soldiers are using to put the skids under the master race.

THE HELP SITUATION: A canvass by operating officers of all the expeditors by means of which the railroads are eking out their inadequate supply of labor is summarized in an article in these pages. Strenuous recruiting efforts have not produced results worth writing home about. The most productive source of added labor has been longer hours and harder work by those already on the job. Generous remuneration for overtime has helped call forth this extra work—but there are other less egoistic motives too which have impelled longer and more purposive hours on the job. Education—especially of supervisors to make them more effective leaders—has been a big help. Better living conditions for men away from home haven't done any harm either.

TRANSPORT CRISIS AHEAD: The Transportation Association of America, unswayed by defamatory criticism, keeps doggedly at its task of warning industry and the people that pursuit by the nation of several parallel and conflicting transport policies is leading straight to chaos in this essential industry. In a statement reported in our news pages, the Association takes the C. A. B. to task for proceeding with its planning for air transportation, just as if the nation had no interest in preserving or advancing any other means of transportation. The intransigent insistence of the long-haul truckers in pursuing their own self-seeking goal, with little or no thought to the preponderant national interest, is also rapped by the Association. Congress is urged to end these anarchic tendencies by adopting a consistent and all-embracing transport policy, which will encourage transport enterprises to thrive rather from constructive service than from cannibalism, or from levying monopolistic tribute encouraged by regulators-become-advocates.

NICKING UNCLE SAM: A Republican governor of Illinois and a New Deal Democratic mayor of Chicago are in competition to see who can cook up for Cook county the more grandiose program for post-war public works. The Republican governor favors large expenditures of private and heavily-taxed capital on railroad terminal improvements, plus even larger public expenditures for untaxed superhighways and airports to take business away from the railroads. The railroads made it known that they had no funds available for investment under such unequal conditions—so the Democratic mayor proposed that Uncle Sam should help out with the railroad terminal improvements too, just as he would for the superhighways and airports. This interesting issue is discussed in the leading editorial herein.

WHO PAYS FOR TRANSPORT? The point is: Why should federal income-taxpayers from Maine and Arizona who have never been to Chicago and don't expect to go there be required to buy fancier railroad stations for Chicagoans? It would be hard to give an answer to that one which would win a passing grade in elementary logic. But if Georgians and Oregonians shouldn't build new railroad terminals in Chicago, then why should they build superhighways or airports for Mayor Kelly's subjects either? How can railroads raise capital, even for economically justifiable improvements—seeing that they have to collect the costs from their customers—when competing airports and superhighways are improved without any charge to customers at all? How can private capital stay in the transportation business and charge its customers commensurately, against the competition of public facilities which, not the customers, but the taxpayers have to pay for?

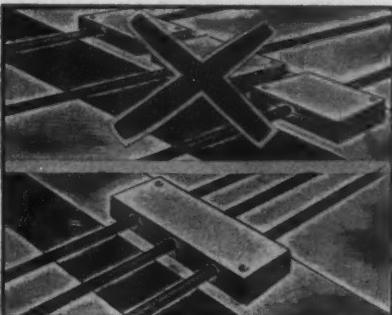
OUSTING PRIVATE CAPITAL: A large shipper who uses railroads primarily observes in substance: My competitors ship by highway and waterway and the taxpayers are paying a growing percentage of their freight bills. This is unsound business, but if my competitors are going to get a free ride, why shouldn't I get one too? Why shouldn't taxes pay just as large a ratio of the cost of railroad transportation as of highway or waterway transportation? If we are going to modernize the highways, waterways, and airways at the taxpayers' expense, why not modernize the railroads in the same manner? How else can the railroads be modernized if tax-provided and untaxed improvements are being constructed without limit for their competitors? Doesn't the national welfare demand modern railroads equally as much as modern highways, waterways, and airways? Our editorial suggests that the New Dealers have been more reasonable and consistent on this question than most business spokesmen.

SEABOARD'S QUEST: How the Seaboard is undertaking a comprehensive inquiry into means of improving its economic and technological performance—with the departments which will apply the findings participating in arriving at them—is described in a short article in this issue.

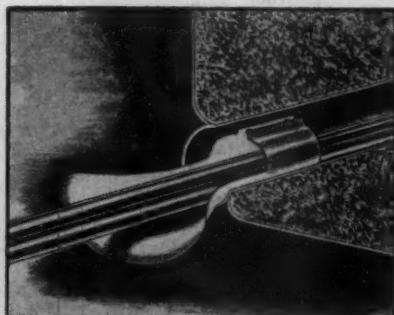
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AND MECHANICAL DAMAGE

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WHERE WEAR MAY OCCUR, such as in duct mouths, protect your cables with a semi-circular abrasion-resistant sleeve.



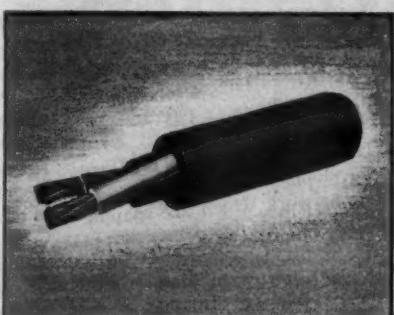
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INSULATED WIRES AND CABLES

RAILWAY AGE

Chicago Versus U. S.—a Program for Subsidies

A recent incident in Chicago illustrated how subsidization of carriers by water, highway and air is tending to cause need for subsidization of railways, also.

Gov. Green of Illinois wrote to his state Post-War Planning Commission instructing it to prepare recommendations to the legislature for reviving the growth and progress of Chicago. He said: "Transportation is the outstanding problem;" Chicago "must expand its airport facilities;" "railroads will have several billion dollars for improvements after the war ends;" "Chicago's present railroad terminals are a disgrace," and "the local government has bickered unsuccessfully for decades . . . for a new consolidated passenger station," and "the planning of superhighways might be co-ordinated with the railroad improvements."

Mayor Kelly of Chicago (New Deal Democrat), determined that Gov. Green (Republican) should not secure any advantage for his party, speedily had a conference with representatives of the railways regarding construction of a consolidated passenger terminal to replace the Illinois Central, Dearborn, LaSalle and Grand Central terminals. The representatives of the railways told the Mayor the railways would be unable to finance the proposed terminal. Thereupon, the Mayor suggested that probably the railways could get aid from the federal government.

(1) All the proposed expenditures on means of transportation would be made for the benefit of Chicago. (2) Under Gov. Green's program all the investment to aid carriers by highway, water and air would be made by government and would not be taxed, whereas all the investment made in railway properties would be made by railway companies and would be taxed. (3) If, in accordance with Mayor Kelly's suggestion, the federal government furnished the capital invested in the railways, either (a) the federal government would make a gift of it to the railways and to that extent subsidize them, or (b) the federal government would become an owner of the railways to the extent of the investment made by it, or (c) the federal government would lend the capital to the railways, and the railways would have to pay interest and taxes on it.

The railways serving Chicago ramify throughout most of the rest of the country, including industrial and commercial centers that compete with Chicago. Why, then, should these railways make relatively any larger investment to benefit Chicago than other communities, and thus subsidize Chicago with earnings derived principally from the rest of the country? Again, why should other carriers be subsidized by being allowed to use free or at less than cost public property created with taxes paid by the public (including the railways), while the railways should not only not be thus subsidized, but forced to pay taxes on all the property they use? Finally, why should the federal government, as proposed by Mayor Kelly, use taxes collected from all the people of the United States to help the railways make investment in Chicago for the benefit of Chicago?

There is no sound reason for government subsidization of any means of transportation, locally, territorially or nationally. Carriers that use government-owned property should be required to pay charges for its use sufficient to maintain it and to cover interest and taxes on the investment in it. The railways, in reduced rates for the government, have paid for the land granted to them many years

Efficiency
FOR VICTORY

ago several times more than the land was worth. For any means of transportation to need and seek subsidies now is proof that if it had to pay the total cost of providing its service it could not compete with other carriers that do bear the total costs of their service.

But railways cannot indefinitely compete with three or more other kinds of subsidized carriers without seeking subsidies for themselves. Mayor Kelly's suggestion is startling; but, obviously, there is as much reason why government should provide terminals for railways as airports for airlines, or highways for buses and trucks, or waterways for boats. And if the entire transportation industry should be subsidized, why should not other non-transportation industries also be subsidized?

The most dangerous political and economic tendency in this country is that of business men, while demanding lower taxes, to join with New Dealers in demanding more and more local, state and federal government spending and subsidizing. Subsidization is socialization of every part of the economy subsidized. This paper hates the thought of any subsidization of railways for any purpose. But the New Dealers see that subsidization of other carriers without subsidization of the railways cannot continue indefinitely; and in the report of the New Deal's National Resources Planning Board government acquisition of all railway tracks and terminals was advocated upon the ground that, without subsidies, the railways could not in future meet subsidized competition and finance themselves. The New Dealers thus showed more intelligence regarding the prevailing trend in transportation than is shown by the U. S. Chamber of Commerce and the National Association of Manufacturers.

How Receptive Are Railroads to New Ideas?

The record of the railways for the past ten years, particularly, proves beyond doubt their receptivity to new ideas which promise to give increased earning capacity and ability to serve the public. In fact, the latter objective is frequently the controlling factor more or less regardless of the effect upon net earnings. For example, dining-car service in general is provided by the railroads at a loss. Air-conditioned equipment is supplied to make passengers more comfortable with no increase in fare. Higher speeds in both passenger and freight service require more powerful and costly locomotives, increased expense for fuel and numerous other items of higher cost which are little appreciated by the public.

Under the title "The Railroads Get Ready to Fight," the Saturday Evening Post for May 20 presented quite a comprehensive picture of railway achievements and new developments designed to improve their competitive position in the field of transportation after the war. The possibility of increasing traffic by developing new raw materials and fostering new enterprises in the

territories they serve is cited. Economies through the use of lighter freight and passenger equipment are suggested. The efforts of the railroads to give constantly more service at less cost are commended and considerable space given to special cars planned for the passenger train of tomorrow, including ultra-modern cars of high passenger appeal and several multiple-deck designs, of high capacity yet more spacious and comfortable than buses.

As pointed out in the article, modern car designers and builders have made a remarkable contribution both to the efficiency and general satisfaction of railroad service in recent years. The same may be said for locomotive builders who have supplied an outstanding new tool in the Diesel locomotive and are making notable improvements in the more familiar steam and electric locomotives, as well as developing some entirely new types. One thing not mentioned is the less spectacular but, in the aggregate, highly important function of railway supply manufacturers who are bringing the full force of modern research in materials and fabricating methods to the perfection of devices and appliances without which railroads in this country simply could not meet the demands now being made on them.

The attitude of railroads towards these new developments is aptly summarized by a statement in the closing paragraph of the article in which P. W. Kiefer, chief engineer of motive power and rolling stock of the New York Central, is quoted as saying that the railroads have no sacred mechanisms and are willing to change anything from a cotter to a complete train provided they think the change is practicable and desirable. He paid tribute to the knowledge, experience and achievements of railway men collectively and said that railroads are not only proud of what they have accomplished in the past but are looking to the future and hence eager to buy and install whatever will make for better railroading. This progressive search for improvement, as described by Mr. Kiefer, should be stimulated and broadened so that railroads will be in the best position possible to meet post-war competition and maintain their leadership in the field of transportation.

A Neglected Area of Public Relations

A railroad's public relations have been defined as the sum total of all contacts which all employees of the railroad make with all members of the public. This definition takes in a lot of territory, but it still leaves out a great deal. It does not adequately emphasize relations of the railroads with the press, which is a special type of employee-public contact—so important that many if not most railroad people think of little else when "public relations" is mentioned. There need, however, be no argument as to whether press services or capable dealing by employees with all members of

the public is the more important aspect of public relations endeavor—because both jobs must be done well if a railroad is to flourish in public esteem.

Some time ago a certain railroad—which was doing well in both the foregoing aspects of its public relations job—discovered by means of a scientific survey of public opinion that, with an important segment of opinion in part of its territory, the company's reputation stood at a level far from satisfactory. Considerable inquiry was necessary before the cause of this condition was discovered—and it was found to have its origin in particularly unfriendly, incomplete, and inaccurate statements about the railroads appearing in school textbooks used in that locality.

Dr. Stanley Pargellis of the Newberry Library, Chicago, discussed the subject of the unfriendliness of historians and textbook writers to business—and especially to the railroads—in an informative address which was published in abstract in the *Railway Age* of February 26, page 416. He maintained that, generally speaking, historians' professional standards require them to seek assiduously for facts and—when they err—it is usually because the true and complete facts are not made available to them. As a corrective, he recommended that railroads make their old records accessible to properly qualified historical scholars.

We have examined the circumstances as set forth by Dr. Pargellis sufficiently to reach the conclusion that, while his recommendation has much merit, it is probably not of itself sufficiently embracing to effect a complete cure of an unwholesome condition — harmful alike to the railroads, to sound scholarship, and to the national interest in achieving public policies toward railroads based on facts, rather than prejudice and misinformation.

Actually, there is only a limited contact between railroad people and the entire field of social science. Not only historians, but scholars in the fields of economics, sociology, and government as well, appear to have very little personal insight into the workings of the railroads. There are exceptions, of course, but it is hardly an exaggeration to say that most social scientists—when they get at the facts about railroad operations at all—do so at second hand. It ought not to be difficult for a public relations officer to imagine

what kind of difficulties he would be having with the press if none of the reporters and editors writing about the railroads had ever had any contact with railroad men.

Yet, the things which are written (or left unwritten) about the railroads in textbooks and reference works in history, economics, sociology, and government can scarcely be any less important in the formation of public opinion about the railroads than what is printed about the railroads in the newspapers. An inaccuracy in the newspapers may do momentary harm, but is likely soon to be forgotten. An error in an accepted reference work, on the other hand, keeps on sowing mischief year in and year out.

Efforts such as those the railroads have put forth to deal frankly and on a friendly basis of mutual acquaintance and respect with the press ought to prove just as effective in promoting a better understanding with social scientists, to their advantage as well as that of the railroads.

Maintenance Deficiency

The record traffic which the railways are now handling, measured both in ton-miles and in speed, is taking a toll of the track structure that is not adequately appreciated in many quarters. As to rail, there is fairly general realization that wear is largely proportionate to the volume of traffic. In respect to ties and

Any Wonder the Private Investor Isn't Too Eager?



ballast, this appreciation of what is occurring is not so general.

Students of track maintenance have long recognized that there is a relationship between traffic volume and tie life, although there is disagreement as to the nature of this relationship. The most generally accepted measure is set up in the Yager formula, which was evolved incident to the settlement of the railways' claims for under-maintenance following the termination of federal control after World War I. This formula fixes the relationship as 30 per cent; in other words, a given increase in traffic is reflected by a corresponding increase in tie deterioration of 30 per cent of that amount.

It is doubtful, however, if this formula measures the full deterioration in ties that is taking place now, for not only is the volume of traffic moving over our tracks greatly in excess of that during World War I, but it is being hauled by locomotives much heavier than those used at the time this formula was developed, and they are moving this traffic at far higher speeds than 25 years ago. Since the destructive effect of traffic varies as the square of the speed, the more severe "beating" that the ties are now sustaining is evident.

The deterioration of ballast is equally pronounced. Not only is the traffic "pounding" the ballast into the subgrade at a rate never before experienced, but the abnormal rainfall in many areas this year is inducing "pumping track" to a degree that is not commonly experienced. As a result, the ballast in many miles of tracks is not only proving inadequate in depth but is being permeated by subsoil that is greatly reducing its ability to render the service expected of it.

It can readily be shown that the deterioration in these basic units of the track structure is proceeding at a rate that is greater than previously accepted relationships with traffic would indicate, and that a correspondingly greater backlog of deferred maintenance is accumulating than is generally believed. Maintenance officers and their managements should prepare now for extensive rehabilitation of the tracks, anticipating that the necessity for tie and ballast renewals will be heavier than past experience or even present surface inspection indicates.

The Sole Political Issue

A republic—if one pleases to call it a "democracy" all right!—like ours is a very delicate thing from one point of view, and especially in days where science has multiplied the opportunity for the demagogue and the pressure group. It is always in danger of slipping into the "single-party-state" condition with an "indispensable leader," and that is the end of personal freedom. The best prophylactic against this is a continuous and frequent change of public officials. The present writer has ventured to impugn the force of Lincoln's remark about not "swapping horses" on the ground of an internal fallacy. The fallacy is its failure to recognize that a republic (or democracy) is always in "midstream," and must "swap horses" often or cease to be a republic.

—Thomas F. Woodlock in the *Wall Street Journal*

How to Go About Buying Shop and Work Equipment

Despite the fact that almost 50,000 new employees have been added to the payrolls in recent months, the railways still need more than 90,000 additional employees. Inexperienced hands and the hiring of women have boosted employment statistics, but the net work-results are far from being in direct proportion to employment totals. The substitution of labor-saving machines and power tools for the labor that has not been available continues, therefore, as the outstanding factor in the maintenance of railway facilities and equipment for handling the still-increasing load of wartime traffic.

Among the more interesting of the recent rulings of the War Production Board are two dealing with the procurement of shop machinery, work equipment and power tools. Interpretation 2 of Preference Rating Order P-142, governing material entering into the operation of transportation systems, explains the procedures to be used by the railways in obtaining items of productive capital equipment that cost more than \$500 a unit.

The interpretation points out that items of this nature are not limited to locomotives and cars, but include all items that the railways normally charge to their capital accounts. This clearly applies to a wide range of work equipment used for maintenance of way work in addition to the "adzes and spike pullers," given as examples in the interpretation, as well as the great variety of modern machinery now required for car and locomotive shops, and exemplified as "lathes and drill presses" in the recent W. P. B. ruling.

While railways may use their Maintenance Repair and Operating Supplies ratings, in accordance with the provisions of Order P-142, to buy minor units of machinery and work equipment not exceeding \$500 per unit (excluding the cost of labor), other procedures are necessary when the unit price exceeds the \$500 limit.

The new interpretation points out that the usual method to be followed in procuring these items is to apply on Forms WPB-541 (PD-1A) covering items of capital equipment, or WPB-1319, or other applicable forms (such as WPB-3131) for special items of equipment, or under order L-41 if a construction job covered by that order is involved.

Greater leeway also is allowed in the procurement of light power-driven tools which may now be purchased under blanket MRO preference ratings, a practice that formerly had been specifically prohibited. In addition to easing the procurement of light power tools, the recent amendment modifying Priorities Regulation No. 3 also extends the use of blanket MRO preference ratings to the purchase of woodworking machinery selling up to \$350. This type is defined as Class II machinery in order L-311 and the change doubles the former limit of \$175.

N. Y. C. Locomotives Scoop Water Without Reducing Speed

Five years' development provides a more efficient scoop and an effective system of tender venting for taking water at speeds up to 80 miles an hour

SEVERAL years ago the New York Central began a program of development of the method of scooping water from track pans looking toward an increase in the train speed at which water could be taken effectively. The first step in the program was improving the tender water scoop to increase its capacity and the efficiency with which it delivers water into the tender tank.

The standard scoop had a deep mouth and was reduced in cross-section to a minimum area of 69 sq. in. at the first joint back of the mouth of the scoop. The axis of this joint of the scoop intersected the surface of the water at a relatively steep angle, thus tending to push the water forward in the trough in the form of a wave in advance of the mouth of the scoop. The redesigned scoop, which, like the earlier standard, has two flexible joints, is shaped to extend into the water pan at a relatively flat angle with the mouth reaching forward sufficiently to take in at least part of the wave built up in advance of the scoop by its movement through the water. The cross-sectional area of the new scoop is uniformly 104 sq. in. from the mouth to the inside of the tender bottom.

The new scoop was developed and comparative tests were conducted in 1939. The former standard scoop developed its best efficiency at about 45 miles an hour. The new scoop does its best at about 75 miles an hour. The tests were run on a 2,000-ft. track pan with an actual water scoop distance of 1,700 ft. With a 7½-in. scoop setting the new scoop delivered 6,953 gals., into the tank at 60 miles an hour, an increase of 42 per cent over the performance of the former standard, and at 75 miles an hour delivered 7,113 gals., an increase of 48 per cent over the performance of the former standard scoop. At 60 and 75 miles an hour, respectively, the new scoop

spilled 1,938 and 1,520 gals., a reduction of 54 and 64 per cent, respectively, over the spillage from the operation of the former standard scoop at these speeds.

For raising and lowering the water scoop air is admitted to one end and exhausted from the other end of the cylinder through a valve on the front of the tender. By the incorporation of quick air-release valves in the air lines adjacent to the cylinders so that the exhaust did not have to flow back through the long line to the valve, the time of lowering and raising the new scoop was decreased about 54 per cent as compared with the former standard arrangement. This increase in the speed of operation has increased the distance through which water can be taken with the same margin of safety. This, it was estimated, would add some 600 gals. to the figures which were attained in the tests before the incorporation of the quick release valves.

Motion Picture Camera Used in Tests

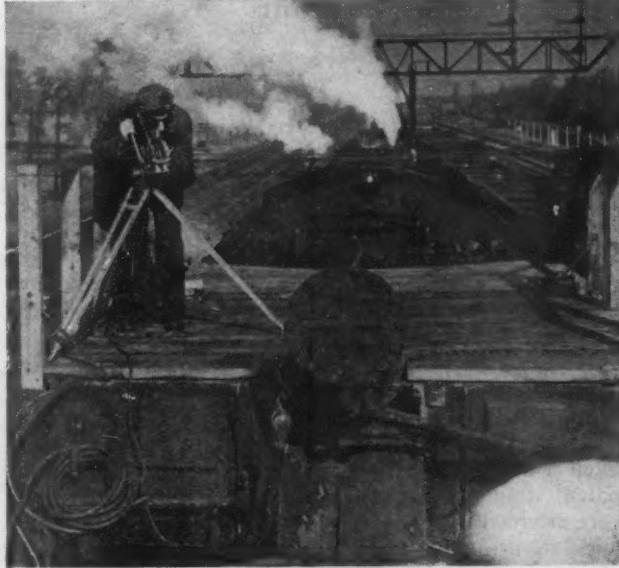
As locomotives were equipped with the new scoops water was taken from the track pans at speeds up to 80 miles an hour. Then occasional cases of broken cab and coach windows on trains passing at water pans began to be reported. A series of test runs were, therefore, planned in order to determine definitely what happened on the tender during the periods of scooping. In this work a motion-picture camera was used. A platform was built over the back part of the coal space to accommodate camera and observers. Water was taken at speeds from 45 miles an hour up to 80 miles an hour. At the higher speeds water began to be discharged from vents in the vertical wall immediately back of the coal



A 15,000-Gal. Tender with Water Scoop and Venting Arranged for Taking Water Without Loss of Speed



One of the L-4B Type Locomotives Built for the New York Central by the Lima Locomotive Works with Tenders Fitted for Scooping Water at High Speeds



Observer's Platform for the Water-Scoop Test



Some of the Vent Return Bends Above the Top of the Water Legs Inside the Coal Space

space within two or three seconds after the scoop had been dropped into the pan and soon thereafter the water began to spray out from under the cistern cover with evidence of considerable pressure. The top of the tank back of the coal space was soon filled with water which then splashed over the side coping in waves, providing water in sufficient body to account for the damage which was being reported. Indeed, at the higher speeds the pressure was so great that the lock of the cistern cover was forced and the cover blown open, to release an on-rushing column of solid water. In these tests the conditions were purposely made abnormally severe by starting each run with the tank about two-thirds full and delaying the pick-up of scoop until the end of the pan was reached, thus deliberately causing an excessive overflow.

Venting the Tender

Then began the development of a system of venting the tender tank to relieve the air and water pressure built up by the in-rush of the water from the scoop. The water is carried upward and backward in a closed conduit which gradually increases in cross-sectional area to a point just under the coal pit slope sheet. Here, the direction is reversed so that the water is directed down the underside of the slope sheet against a V-shaped divider which diverts the water to the side compartments and up to the front of the tank.

There are seven vents, each 6 in. in diameter, along each side of the tender tank, which open at the top of the water space. Five of these are carried through return bends above the top of the tank, back through the water space and thence down to outlets through the water-bottom tender frame. In addition to these vents, a 600-gal. auxiliary overflow reservoir is located above the tender water space immediately back of the coal space. This reservoir is divided by space in the center required to take the coal-pusher cylinder. Two of the vents on each side of the center extend down from the top of the reservoir through the tender water space to outlets through the bottom of the tank.

To relieve the cistern cover from the severe pressure to which it was formerly subjected an inside trap door is hinged to the bottom of the cistern and arranged with a counterweight to keep it normally closed. This, in effect, acts as a check valve opening under the weight of the water when it is taken from a water column but closing against the water pressure inside the tank when scooping.

In the return band at the top of each vent pipe is a 1-in. vent which extends out through the side of the tender and discharges behind a small shield. These vents are necessary to prevent the vent pipes, the ends of some of which are below the level of the water in the tank when it is full, from acting as siphons to draw water from the tank after the scoop has been raised.

By this means all water discharged from the tender dur-

ing the scooping operation is delivered below the bottom of the tank and no water is spilled from the top of the tender. Considerable development work was required to determine the correct angle at which the water should be delivered to avoid damage to ballast either on the track under the locomotive, or on those immediately adjacent to it. After trying several arrangements it was found

that satisfactory results were obtained by directing the water downward at an angle of 45 deg. from the horizontal and toward the rear at an angle of 30 deg. outward from a line parallel to the center of the track. This delivers the water to the pavement with which the area between the tracks is covered at water-pan locations.

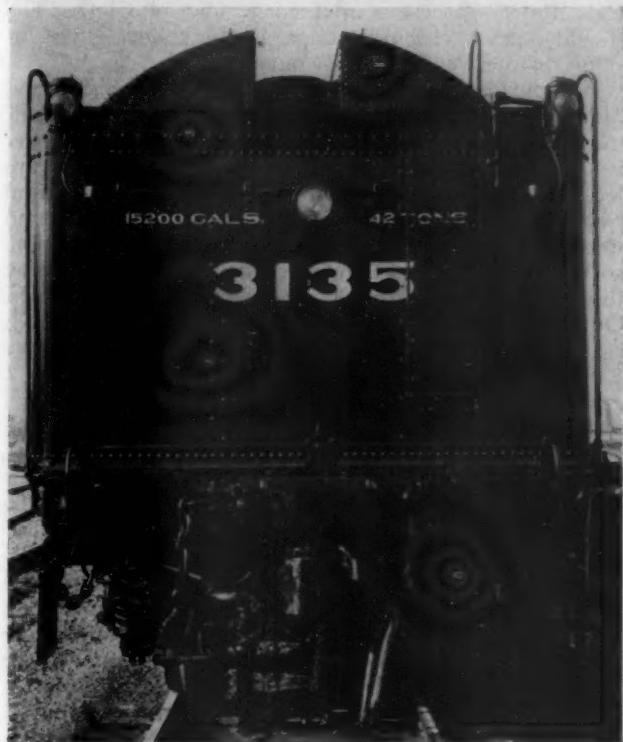
On one water leg at the front of the tender are three gauge cocks for the fireman's use in determining the water level in the tank. Two additional cocks have been added, one to the tank top and one to the front of the return bend extension on the front vent pipe. Just before reaching a water-pan location where water is to be taken the fireman first opens the try cocks. The scoop is then dropped into the water pen. A nominally full tank is indicated when water flows out of the tank top try cock and the maximum amount of water has been scooped when water flows from the upper try cock on the forward vent elbow.

Water at this try cock indicates a tank which, after the water in the auxiliary overflow reservoir has flowed back into the tank, is filled practically to the top.

More Locomotives Being Equipped

The tender overflow equipment has been installed on the tenders of the Class L-4B 4-8-2 type locomotives delivered by the Lima Locomotive Works in December, 1943, and 60 new large capacity tenders now under construction will have this arrangement. Other locomotives are being equipped by the railroad in its own shops. The L-4B locomotives are essentially the same as the L-4A type delivered by the same builder early in 1943. They develop a tractive force of 59,900 lb., have 72-in. driving wheels, and have 26-in. by 30-in. cylinders and an indicated horsepower of 5,200 at 73 m.p.h. The boiler pressure is 250 lb. per sq. in. There is 4,676 sq. ft. of evaporative heating surface and 2,082 sq. ft. of superheater heating surface.

The tenders on the new locomotives have a capacity of 15,200 gals. of water and 42 tons of coal. They are carried on two six-wheel trucks, with 6½-in. by 12-in. journals fitted with SKF roller bearings.



The Auxiliary Overflow Reservoir Is Divided in the Middle by Space for the Coal Pushed Cylinder



The Rear Vent Return Bend and a 4-In. Drain Pipe for the Top of the Water Tank Back of the Coal Space

Time Now to Build Postwar Traffic

I am convinced that the great majority of Southern Pacific men and women are well-intentioned, kindly and considerate. The essential good-heartedness of most S. P. people is demonstrated time and again when fellow employees have serious personal troubles, or when patrons are confronted with emergencies and are in distress. But in the present-day rush and strain, we may be thoughtless at times, and give short answers. Moments of exasperation are apt to lead us astray. It takes restraint and effort to carry out our good intentions toward those with whom we work and deal. I urge that we all take special care, that we make this special effort. If we do, we will all benefit—individually and collectively.

Good personal service builds friendships that will be sorely needed when we return to peace time with its prospects of greater competition than ever before. After the war people are going to deal with those transportation agencies that help them or try mightily to help them when they most need help—now. Our post-war business will depend on the goodwill of today's customers—men in the service, commercial shippers or travelers, whoever they may be. And whether that volume of business turns out to be large or small will determine how many jobs and what opportunities there will be for us after the war.

—President A. T. Mercier in the S. P. Bulletin

Problems of the M.R.S. in Iran

Contributed information* tells of the work of the Military Railway Service in Iran and the unusual conditions and obstacles being overcome to get war supplies and food to Russia

SINCE the Transportation Corps' Military Railway Service has taken over the operation of the Iranian State Railways, the volume of lend-lease shipments moving into Russia over this important route has been greatly increased. This has been done despite many obstacles, about which complete information may not be available until after the war. However, the fact that American army-railroaders have "done a job," is evidenced by the fact that 11 officers of the Transportation Corps were among those decorated recently† when Joseph Stalin, head of the Union of Soviet Socialist Republics, conferred awards on 33 officers and enlisted men of the United States Army for "the successful performance of the Persian Gulf Command in the movement of arms, equipment and food—thus affording great assistance to the Red Army in its struggle with the Nazi German invaders."

The following letter from Lt. Col. Clutz, now serving as a division superintendent on the Iranian State Railways, and an article by Lt. Col. Charles T. Warren,‡ recently serving as chief engineer of this road, explain some of the difficulties that the army-railroaders have faced in this distant part of the world.

Revise Operating Rules

By Lt. Col. John J. Clutz

The Iranian State Railways book of operating rules and signals was issued by the headquarters, Military Railway Service, more than a year ago, shortly after American personnel assumed control of the operation of the railway south of Tehran, and it is a literal translation of the original I. S. R. Operating Rules. Personnel trained on American railroads found some of the rules very interesting. Ever since these rules were issued, we have been working on a new book of rules, to embody basic American practices, modified to accord with conditions here, and covering only operational features found in Iran, where there are no interlockings, automatic signals or multiple tracks.

During the last week-end final revision of the proposed new rules was completed. An accompanying photograph shows the committee at its labors in the I. S. R. Board of Control room in Tehran station. Colonels Smith, Mattson and Clutz are operating battalion commanders and, as such, are division superintendents. Col. Shappell is superintendent of transportation in the 3rd

* This material has been cleared for publication by the War Department, Bureau of Public Relations.

† Among these was Lt. Col. John J. Clutz, former division engineer on the Pennsylvania, who received the Order of the Fatherland's War, First Class.

‡ Former engineer of track of the Wabash, with headquarters at St. Louis, Mo.

Military Railway Service Headquarters. Col. Gildea is his assistant. Major Hunt is liaison officer for the Military Railway Service with the port authorities, and Capt. Baylor is the executive officer for Col. Clutz. The shoulder patch visible on Capt. Baylor's shirt is the insignia of the Persian Gulf Command.

Incidentally, *Railway Age*, Railway Engineering and Maintenance, Railway Mechanical Engineer, and Railway Signaling are helping us keep in touch with the developments on our home railroads, even though we are located on the other side of the world. The Army Postal Service is doing a good job in getting publications to us. We distribute copies throughout our organization, so that all of the men get a chance to see them, even though they are scattered over several hundred miles. Our organization alone has men from 122 railroads.

The Iranian State Railway

By Lt. Col. Charles T. Warren**

Gazing into the street from our headquarters on the edge of the cradle of western civilization at a slowly moving camel caravan, one is reminded that time has stood still for thousands of years in this part of the world, except for an occasional modern improvement, such as the railroad we are operating. Prior to the opening of this railroad, Central Iran was one of the most inaccessible parts of the world and the isolation of Iran's 4,000-ft. plateau behind formidable mountain barriers made the railroad necessary for the transportation of goods.

This railroad, which the Americans started taking over from the British in January, 1943, was the outgrowth of one man's dreams. When the old Shah, Reza Pahlevi, ascended the Persian throne in 1925, he started almost immediately financing the construction of a Trans-Iranian railroad. Actual construction work was started in 1928. Then, after many delays due to financing troubles, confusion and misunderstandings, the work was placed in the hands of a Danish firm and finally pushed to completion in 1938. All work, with the exception of the tunnels and a few steel bridges, was done exclusively by coolie hand labor.

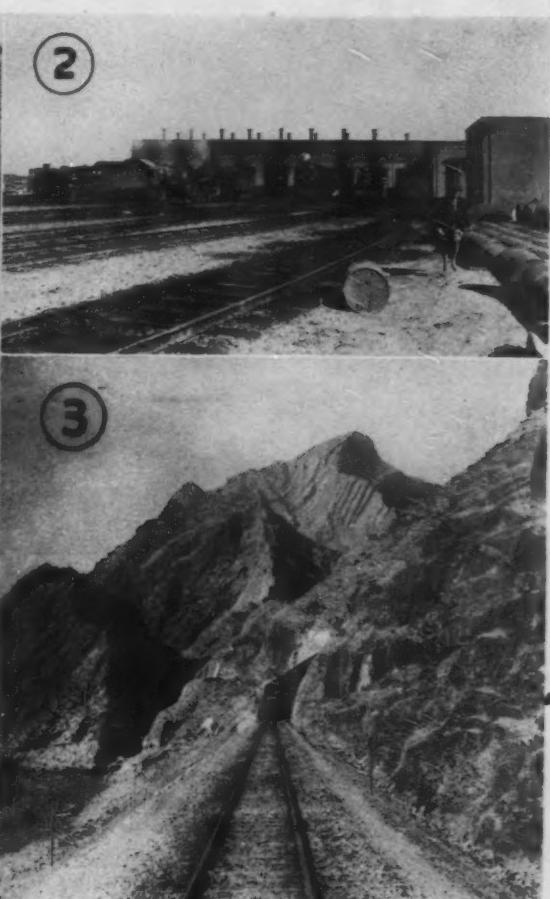
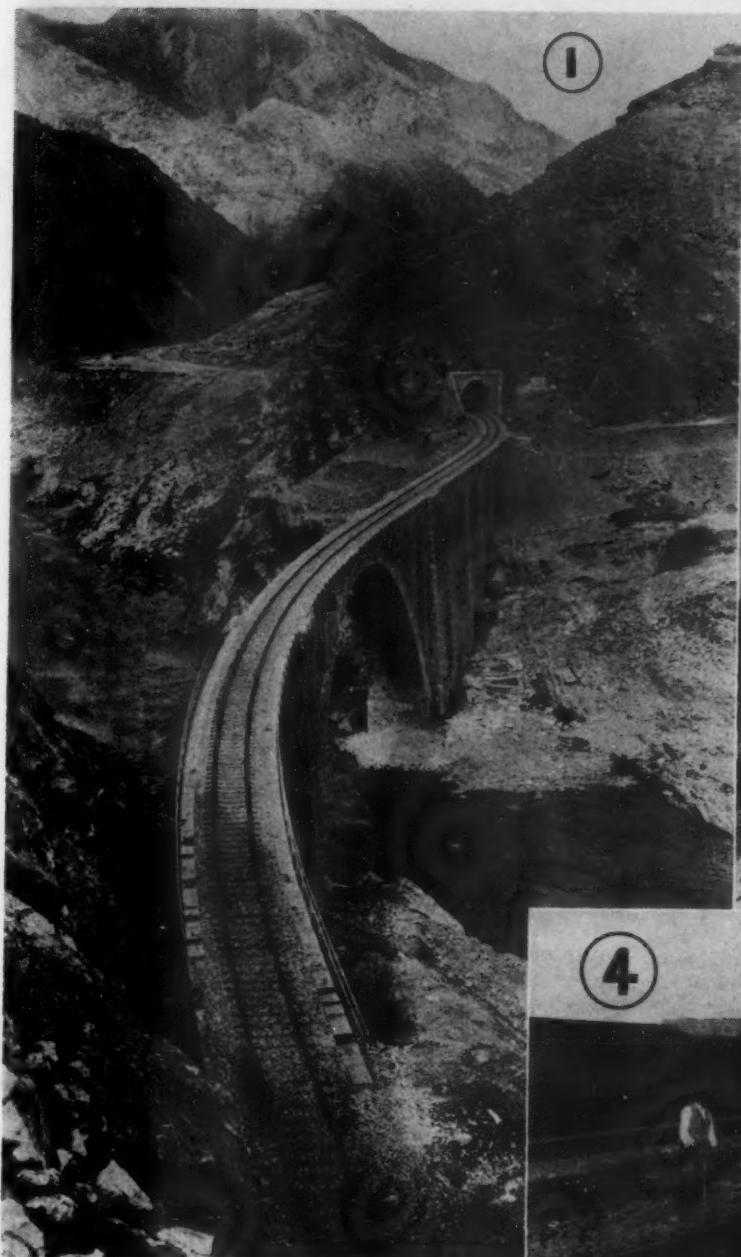
Description of the Line

The line runs approximately north and south and is 865 miles long. Its southern terminus, Bandar Shahpour, is on the Persian gulf and the northern terminal, Bandar Shah, is on the Caspian sea. Tehran, the capital of Iran and the headquarters for the railroad, is located 289 miles south of Bandar Shah. Tehran is a fairly modern city of about one-half million population, protected by the high Elbruz mountains to the north. Mt. Demevend, one of the highest peaks in the world (elev. 19,000 ft.), towers nearby.

The southern terminus, Bandar Shahpour, is an artificial peninsula extending out into the Persian gulf about eight miles from the desert's edge. The tide changes as much as 16 ft. in 24 hours at this port.

Leaving Bandar Shahpour, the railroad crosses the

** Former chief engineer, Headquarters, 3rd Military Railway Service. (Since this was written, Col. Warren has returned to the United States.)



Scenes on the Iranian State Railways: (1) A Typical Masonry Bridge on the Line. Note the Tunnel and Rugged Country in Background, Also Typical Along Much of the Line. (2) A "Running Shed," or Enginehouse. (3) Another View of a Tunnel Entrance, Showing Also the Mountainous Character of Much of the Country Traversed. (4) A Coolie Track Gang Bossed by an American Soldier, Working in a Yard. The Signals in the Center of the Yard Were Installed to Protect Train Movements Through the Yard but Are Considered Unsafe and Are Not Used by American Personnel. (5) Another Yard View.



Officers of the Military Railway Service in Iran, Working on a New Book of Rules

Left to Right—Major A. L. Hunt, formerly trmstr., Penna.; Lt. Col. J. H. Gildea, formerly asst. supt., U. P.; Col. M. M. Shappell, formerly asst. supt., U. P.; Lt. Col. W. C. Smith, formerly trmstr., No. Pac.; Lt. Col. B. E. Mattson, formerly asst. supt., No. Pac.; Lt. Col. J. J. Clutz, formerly div. engr., Penna.; and Capt. George Baylor, formerly svpr., Penna. Shoulder Patch on Capt. Baylor's Shirt Is the Insignia of the Persian Gulf Command.

desert for 70 miles to a point where a 3,000-ft. bridge carries the railroad across the Karune river into Ahwaz, the headquarters for the Southern division of the railroad, in the heart of the Khuzistan desert. The town is small, being inhabited mostly by railroad employees and a few thousand natives. In the summer, all activity ceases between 11 a.m. and 4 p.m. each day due to the intense heat. The temperature ranges between 115 and 130 deg. daily. To add to the misery of the heat, numerous sand storms blow across the desert. The sand drifts so badly that the track gangs spend considerable time cleaning it from the tracks to prevent the rails from becoming covered.

Road to "Garden of Eden"

In the fall of 1942 the British constructed a new line south for 75 miles from Ahwaz to Khorramshahr, a new port, on the Shatt-al-arab river. Another branch line connects with this line 50 miles south of Ahwaz and extends to a port on the Shatt-al-arab river in Iraq, which is supposed to be near the biblical Garden of Eden.

North from Ahwaz, the railroad continues through the desert for 100 miles where it enters the foothills and starts climbing into the wild Luristan mountains, which are inhabited by the Lur tribes. In this territory the railroad winds through 126 tunnels in a little more than 100 miles, to reach Do-Roud. The longest tunnel is about $1\frac{3}{4}$ miles long. In the summer, the canyons through this territory are roaring furnaces as there are no winds and the rocks hold the heat.

From a construction standpoint, the canyon section of the Luristan mountains was the most difficult construction south of Tehran. To begin with, this section was almost inaccessible due to sheer canyons, with no roads or paths available. Between the tunnels are deep ravines and the rushing waters of the Ab-i-cesar river, which the line crosses and recrosses. It was first necessary to cut a construction road in the sides of the gorges and mountains, where there was always danger of land slides.

Continuing north from Do-Roud, the road climbs to

an altitude of 7,272 ft., and then crosses an undulating plateau through Arak (the Rug City) and Qum (the Holy City) to Tehran, the capital. From Tehran the road turns eastward for 50 miles and then north into a pass in the Elbruz mountains, reaching an elevation of 6,927 ft. There is a tunnel two miles long at this point. Getting down the north side of these mountains was an extremely complicated engineering problem. Most of the grade is 2.8 per cent and in one location the track is badly snarled, with six bridges and four tunnels within a radius of less than 900 ft.

Near the foot of the mountains, the country is tropical. It rains almost continually and jungle foliage envelops the line. Considerable trouble is experienced in this location with slides. Leaving the jungle, the fertile plains of Mazanderan are crossed to reach the port of Bandar Shah on the Caspian Sea, 85 ft. below sea level. The climate in the northern part of Iran is cold in the winter and at times the temperature may drop below zero. The average annual rainfall is seldom over 14 inches and practically all of it falls during the winter months. In the summer the sky is cloudless and the air dry and clear. The sun's rays are exceedingly powerful and must be watched closely to prevent sunstroke. In the summer the temperatures in the north frequently get up to 108 or 110 deg. F. Frequent dust storms sweep across the country. Several small earthquakes have occurred that have done some damage.

Track Condition

The total estimated cost of the railroad is placed by the government at \$125,000,000. This includes the Tehran-Mianeh line of 269 miles, and the Tehran-Shahroud line of 197 miles, as well as the main Bandar Shah-Bandar Shahpour line of 865 miles. The railroad is operated by the government and has no bonded indebtedness.

This is a single-track, standard-gage railroad. The maximum curvature is 8 deg. 20 min. In the south much of the grade is 1.5 per cent, while north of Tehran, the maximum grade is 2.8 per cent. The rail weighs 78 lb. and 67 lb. per yd. and is $12\frac{1}{2}$ meters (41.01 ft.)

long. There are 17 ties per rail in tangent track and 19 ties in curves. All main track is tie-plated. The track is ballasted to a depth of 12 in. with coarse hand-broken rock or pit-run gravel. Ballast is provided by local contractors along the line who haul it to the track with donkeys. The present cost is about four dollars per cubic yard.

There are no rail anchors on the railroad. Six-hole angle bars are used and slot-spiked. Also, screw spikes are standard over the entire railroad, and these have a tendency to help prevent rail from creeping. Considerable trouble was experienced last summer with the rail running, due to the predominating tonnage on the road being in one direction. This trouble was anticipated beforehand and rail anchors were ordered from the United States.

In the construction, rail was provided by Russian, Ger-

soft manganese steel. Number 9 frogs are used on the main line and No. 7 and No. 9 frogs in the yards. The switches are of excellent construction for slow-speed track, but would not be considered safe for high-speed operation. Turnouts come complete with steel switch ties. Lamps are maintained on all switches.

The railroad across the desert and the mountain plateau is constructed on a four- or five-foot fill. Most of the cuts are through rock. Due to the railroad being new and all embankment being placed by hand labor, trouble has been encountered because of settlement in many of the fills.

Excellent Drainage

Hardwood ties for the railroad were supplied from the forest in the north. However, steel ties were used in 250 miles of track, through the tunnel sections. The wood ties were pre-bored and given a pressure treatment with creosote or Tanalith at a government treating plant in the north. The treatment was not satisfactory and many ties are now being removed that have been in the track less than 10 years.

Waterways and drainage ditches were exceptionally well planned. There are good openings under the track, and stone retaining walls, to divert water into the openings, sometimes extend several hundred feet from the track.

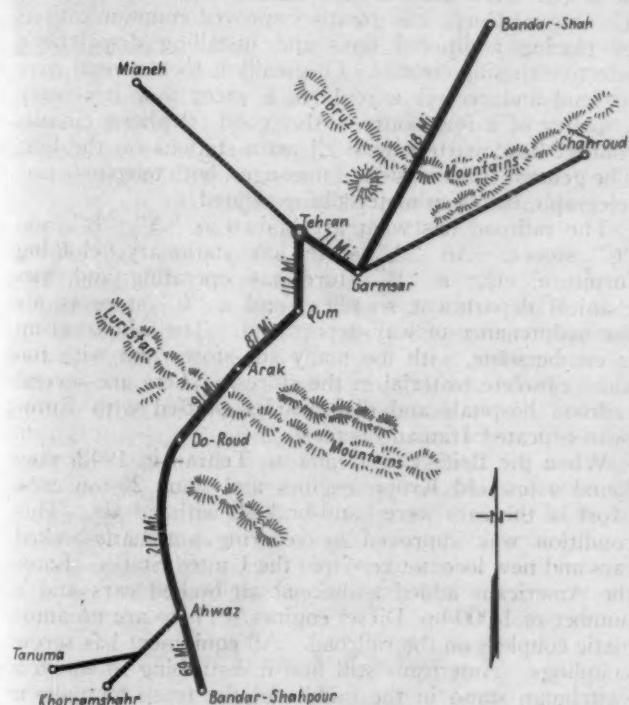
Where the track parallels streams, heavy stone retaining walls have been constructed to prevent scouring. Through the cuts there are excellent stone drainage ditches.

In the north, all types of tunneling were used. In the south, due to the scarcity of timber, the Belgian system of tunneling was used. One 10-mile section required 20 tunnels. In another stretch there are 126 tunnels totaling 38 miles in length in a little over 100 miles distance. Many of these tunnels are on a 1.5 per cent grade and a number have eight-degree reverse curves in them. One long tunnel is located in a mountain that is moving but, so far, no serious trouble has developed.

Stone for Bridges Abundant

There are over 3,000 bridges on the railroad, including several of the steel girder type. As an abundant quantity of stone is available, most of the bridges and retaining walls were constructed of good masonry rather than concrete. There are many remarkable bridges and viaducts, some of them being over 400 feet long and 100 feet in height.

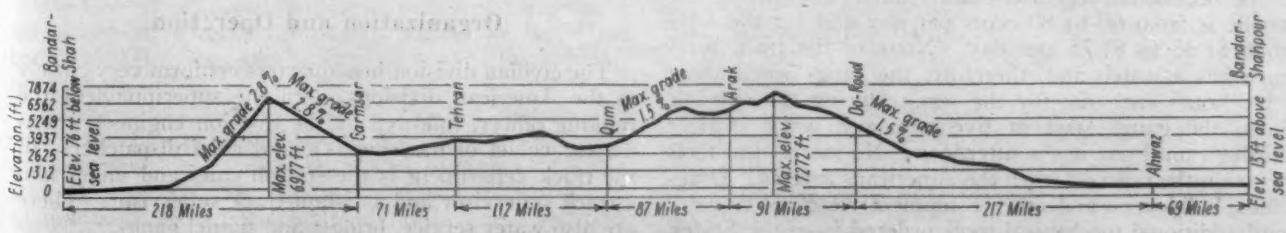
There are practically no road crossings on the railroad, except through the cities and villages. The few main highways that cross the railroad are taken care of with grade separations. At most villages there are no crossings at all. The predominating traffic on secondary roads is camel caravans, donkey packs, and pedestrians. The only roadway signs are the kilometer posts, gradient



The Lines of the Iranian State Railways. The Main Line Between Bandar-Shahpour and Bandar-Shah Is Being Operated by Military Personnel

man, and American firms. The rail is extremely soft and most of the difficulty experienced with it has been due to split heads in the Russian and German rail. So far, no fissures have developed in any of the rail, which is due, no doubt, to the light tonnage handled prior to 1943.

All turnouts were purchased from Germany when the road was constructed. They include rigid frogs made of



Condensed Profile of the Main Line Between Bandar-Shahpour—Bandar-Shah

signs, station signs, and an occasional road crossing sign. These signs and the telephone and telegraph poles are of steel construction.

Traveling over the railroad during the first few months after the American soldier-railroaders of the Transportation Corps' Military Railway Service took over was done with extreme difficulty. There were no camps, hotels, or even places to secure food. None of the water was safe for drinking. It was necessary for Americans, either on a train or traveling on a track car, to carry bed-roll, food and water and simply sleep where night-fall overtook them.

From the train, mountain lions, eagles, bears, foxes, jackals, wild boar, mountain goat and sheep, and gazelle are not uncommon sights. Natives occasionally take pot shots at passing trains, and at night it is safer to ride with car window shades drawn.

From the outset it was apparent that the first problem facing the Military Railway Service was to secure an adequate supply of water. Water in Persia comes from the usual sources, wells, springs and streams. Extensive work was done on the existing water stations, additional pumps were installed, and settling basins and storage tanks were constructed. Other sources of supply were tapped. Consideration had to be given to the diminishing supply in the fall months prior to the wet season. At one location, water was pumped 25 miles from a river to the point of consumption. At another location in a canyon, water was pumped from a river that would rise as much as 30 ft. over night.

Track Forces and Equipment

Track sections are from three to six miles in length and each gang consists of a foreman, an assistant foreman, and 12 to 25 coolies, depending on conditions, length of section, etc. The men walk to and from work, carrying their tools. All motor cars used on the railroad are assigned to officers and run on train orders. Coolie track walkers go over the entire section twice each eight hours in the 24. They occasionally find broken rails, slides, rocks on the track, etc.

All motor cars are enclosed and run on train orders. They are assigned to general and local supervisory officers and each car has an assigned operator familiar with the operating rules. There are no motor car set-offs along the railroad. A well-tooled motor car repair shop, under the supervision of the maintenance of way department, is located at Tehran which keeps the cars in good running repair.

Coolie Labor Slow but Willing

Most of the coolie labor used on the railroad is undernourished and illiterate. They are weak and slow moving. However, the men are easy to handle, quick to learn, and willing to work. Many live along the right-of-way in buildings provided by the railroad while others live in native mud hut villages. Their diet is composed almost entirely of bread, rice, and tea, with some occasional vegetables and fruits. The pay of the coolie is from 60 to 80 cents per day and for the foreman \$1.35 to \$1.75 per day. None of the track foremen has a watch and, therefore, the gangs work about nine hours each day by the sun. During the extreme heat, the gangs start at five a.m. and work straight through until one in the afternoon. No mechanical tools were on the railroad when the Americans arrived. Draglines, bulldozers, and other equipment were put to work and additional mechanical tools ordered from the States.

There was no book of rules or safety rules for main-

tenance of way employees. All instructions were vague and were issued by word-of-mouth to employees below the grade of track supervisors. Due to such procedure the accident record was high. Little investigation of personal injuries was made before our arrival and little or no attention was paid to unsafe conditions over the railroad.

The Americans have prepared and issued a book of safety rules and steps were taken to improve unsafe conditions and practices gradually. No torpedoes or fuses are used on the railroad as we do not trust the natives with them. Flagging is done with a red flag or red light.

"A," "B" and "C" Stores

At the time the railroad was taken over by the Army, there was a four-wire communication line, two wires of which were used as a metallic dispatcher's circuit. The Signal Corps has greatly improved communications by placing additional lines and installing dispatcher's selective ringing circuits. Originally it took several days to send and receive a reply to a wire; now it is only a matter of a few hours. Also good telephone circuits connect headquarters with all main stations on the line. The general transmission of messages, both telephone and telegraph, has been materially expedited.

The railroad has what are known as "A," "B," and "C" stores. An "A" store has stationary, clothing furniture, etc.; a "B" store has operating and mechanical department supplies; and a "C" store is for the maintenance of way department. The whole set-up is cumbersome, with too many sub-stores and with too much obsolete material in the stores. There are several railroad hospitals and dispensaries, staffed with European-educated Iranian doctors.

When the British first came to Tehran in 1942, they found a few old Krupp engines and some 20-ton cars. Most of the cars were hand-braked, with no air. This condition was improved by securing automatic-braked cars and new locomotives from the United States. Later the Americans added additional air-braked cars and a number of 1,000-hp. Diesel engines. There are no automatic couplers on the railroad. All equipment has screw couplings. Americans still find it disturbing to watch a switchman stand in the middle of the track to make a coupling.

The principal locomotive and car repair shops are located at Tehran. They are of good fire-proof construction and well equipped with modern tools and machinery. Much of the machinery has been added since the Americans took over the railroad. The engine terminal houses are known as "running sheds," being rectangular in design with 6 to 12 stalls in each building. All terminals have turntables and at most of these stations there are also wyes. Incidentally, at the most important terminal there was only a turntable and it was necessary to construct a wye, which came in very handy on several occasions. Passable wrecking cranes are available for cleaning up wrecks and derailments.

Organization and Operation

The civilian division headquarters conform very closely to the American divisions, with the superintendent the ranking officer, followed by the division engineer, trainmaster (chief of movements), and chief dispatcher. In the track department is the section chief and under him a track supervisor and assistant track supervisor. There are also water service, bridge, and tunnel gangs.

Trains are moved in positive blocks under line-clear

tickets. Operators are located in all stations. These stations are from 6 to 15 miles apart, most of them being $9\frac{1}{2}$ miles apart. When a train approaches a station, the operator calls the next station in advance and gets authority to move the train and the dispatcher is also notified of the train movement. Each dispatcher controls approximately 200 miles of railroad. There are no automatic signals on the line.

Cut Time of Mail Train Run

The daily mail train, which originally took 30 hr. and has now been cut to 25 hr. for the run from Ahwaz to Tehran, is a carnival for anyone riding it the first time.

There are first, second, and third class coaches. The first and second class coaches are compartments seating eight in the day-time and providing four berths at night. The third class cars are little better than box cars with hard benches. The first class fare from Tehran to Ahwaz (495 miles) is \$18. Leaving the terminal, all the relatives come down to see the departing passengers, and there is much confusion. A sharp eye must be kept on your baggage throughout the trip to prevent theft. Passengers, particularly in third class cars, get on the train with everything imaginable—chickens, ducks, goats, sheep; and the most important thing is their samovar for making tea. The cars swarm with flies and the odors are not too pleasant. At every station swarms of passengers get off to wash, get drinking water, or confer with friends; many get off to say their frequent prayers.

In the first and second class coaches are officers and soldiers from the many Allied countries . . . Persian, Indian, Russian, British, Polish, American, and sometimes an occasional Free-French soldier. Of course, there are the ever-present Persian police in uniform at all stations. The crowd is good natured and the soldiers of the many countries exchange views (where language and interpreters permit), swap food, drinks, reading material, etc. The trip is long, tiresome, and dirty.

Language Difficulties

One of the great difficulties in the operation of a railroad in a foreign country is the language confusion. There are a surprising number of people here, however, who speak English. This is due in great part to an American mission school which has operated in several cities in Persia for a great many years. Also, with the help of interpreters and the sign language, we have done surprisingly well. In the first few months of operation, anyone traveling over the railroad on business always took an interpreter. Now interpreters are seldom used, except in the offices. Quite a number of the illiterate coolie foremen have grasped enough English to understand what is wanted on the job and many of our soldiers, in daily contact with Iranians, speak passable Persian.

We have done things and seen practices that would not be considered good railroading back home, but when one is 10,000 miles from his base of supply, improvising becomes second nature.

We have had our problems but all the officers and men in the Transportation Corps' Military Railway Service have seen the tonnage move to Russia, so we know that our methods have got results. No one department or individual was responsible for this, but rather the combined efforts of all.

Allows More Debt Under New Mo. P. Plan

WASHINGTON, D. C.

IN APPROVING what it termed "extensive" modifications in the plan of reorganization of the Missouri Pacific approved by it in 1940, which was referred back to it by the federal court for further consideration last year, the Interstate Commerce Commission has made major changes in the distribution of cash and new securities to the senior creditors of the old company and the subsidiary companies involved, but has not altered its earlier finding that the equity holders in the old company are not entitled to participate in the reorganization.

Previous Plan Rejected

The plan which the commission adopted in 1940 (outlined in *Railway Age* of January 20, 1940, page 166) was approved by the federal district court on July 12, 1941, and later was submitted to the vote of certain classes of creditors. Of the 16 classes of claimants voting, the approved plan was rejected by 6 classes. Meanwhile, interests dissatisfied with the plan had taken the case before the federal Circuit Court of Appeals. During the pendency of the proceeding in that court, the Supreme Court of the United States handed down its decision in the Western Pacific and Milwaukee reorganization cases, thus clarifying the commission's authority in formulating reorganization plans in which more or less severe reductions in capitalization were effected, in part, through barring equity holders from any share in the reorganization.

Following these events, the circuit court, on May 8, 1943, remanded the Missouri Pacific case to the district court, which, after further hearings, referred the plan back to the commission for further proceedings, including consideration of modifications of the plan or proposal of new plans. This action of the court was intended, it was indicated, to give the commission an opportunity to compensate the senior creditors for the loss of their seniority rights, if it should find it proper to do so, and also to allow the commission to modify its findings in the light of changed conditions and the road's greatly increased recent earnings. The commission then reopened its proceedings, and a so-called compromise plan of reorganization was submitted by a group representing holders of several issues of the senior securities of the old company, and also the debtor company and the Alleghany Corporation, holder of approximately 64.3 per cent of the old company's common stock and smaller portions of preferred stock and convertible bonds.

In many respects the modified plan now approved by the commission conforms to this "compromise plan," which was analyzed in *Railway Age* of October 2, 1943, page 537. It differs, however, in its treatment of old company equity holders, for whom the compromise proposal provided some participation in the form of allotments of warrants to purchase new company stock. Participation of the Alleghany Corporation in the new company is thus restricted to the extent of its ownership of old company bonds, as no provision is made in the modified plan for any interest in old company stock.

The chief changes made in the commission's 1940 plan are: (1) The effective date is set as January 1, 1943; (2) senior classes of creditors are allotted \$30,574,095 in cash in partial settlement of claims for accrued interest; (3) cash settlement of claims for interest accrued on

a 4 per cent basis is provided in the case of the Reconstruction Finance Corporation and certain banks; (4) distribution of cash among creditors is allowed in advance of consummation of the plan; (5) purchase warrants for new class B no-par common stock are allotted junior creditors, also stockholders of the New Orleans, Texas & Mexico; (6) the duration of the voting trust is decreased to 5 years, and the court is given the right to name the voting trustees; and (7) the basis for selecting the reorganization managers and the initial board of directors is different.

Under the modified plan, as under the 1940 proposal, one new company will be set up as successor to some 26 companies making up the Missouri Pacific system, the most important being the Missouri Pacific, International-Great Northern, and New Orleans, Texas & Mexico. The Missouri-Illinois, though a part of the system, is not included in the reorganization.

More Fixed-Maturity Securities

The capitalization of the debtor company was \$671,205,664. In its 1940 plan (adjusted as to equipment obligations to January 1, 1943), the commission proposed a new capitalization of \$562,398,400. The present plan calls for a capitalization of \$560,480,000, subject to some increase on account of additional common stock to be issued to satisfy unsecured claims and to satisfy purchase warrants that may be exercised. Comparisons of capitalization under the 1940 and modified plans follow:

	Modified plan	1940 plan
Fixed interest debt		
Undisturbed equipment obligations.....	\$15,755,000	\$15,755,000
Plaza-Olive Bldg. first mortgage bonds.....	591,000	591,000
First mortgage bonds.....	166,809,000	158,700,500
10-year collateral 3½ per cent notes.....	10,352,000	14,433,500
Total.....	193,507,000	189,480,000
Contingent interest debt		
General mortgage bonds.....	159,175,000	120,661,000
Total debt.....	352,682,000	310,141,000
Preferred stock.....	57,717,000	115,501,000
Common stock (stated value, \$100 per share).....	150,081,000	136,756,400
Total stock.....	207,798,000	252,257,400
Total capitalization.....	560,480,000	562,398,400

Annual charges of the old system were \$29,108,019, of which \$24,770,052 was fixed interest. The accompanying table gives a comparison of annual charges before common dividends under the 1940 plan and the modified plan.

	Modified plan	1940 plan
Fixed interest.....	\$7,289,735	\$7,186,137
Capital expenditures fund (omitting depreciation allowances).....	580,000	
First mortgage sinking fund.....	417,023	
Contingent interest.....	7,367,202	5,327,940
Contingent debt sinking funds.....	795,876	603,305
Total fixed and contingent charges.....	15,869,836	13,697,382
Preferred stock dividends.....	2,885,841	5,775,050
Annual charges before common dividends.....	18,755,677	19,472,432

Allocations of new securities and cash were designed primarily, the commission's report indicates, to improve the position of junior creditors by inducing senior creditors to compromise part of their claims for cash, so releasing part of the total capitalization to apply against junior claims. The principal and accrued interest on certain claims and unpaid interest on other claims were paid by the trustee under a court order of September, 1943, through the distribution of \$44,274,119 in cash, certain portions of which are to stand as credits against cash payments under the modified plan.

Approval of a capital structure including "an unduly large amount of indebtedness of fixed maturity even

though in large part bearing contingent interest" is proper, the commission held, "in view of existing conditions and the reasonably favorable prospects of sufficient coverage in the future of the full interest requirements," and it therefore has increased the total debt of the new company by about \$42,500,000.

Because of the possibility that a contract requiring the I.-G. N. to maintain its general offices in Palestine, Tex., might be construed by the courts to apply to the new company, as successor, the plan includes a provision for a separate incorporation of the properties of that subsidiary if it should be necessary to avoid application of the requirement to the new company.

The report went into some detail as to the relations of the Alleghany Corporation to the old company, reviewing certain allegations that funds of the M. P. had been improperly advanced to the N. O. T. & M. so that subsidiary could pay unearned dividends on its stock, with the proceeds of which the M. P. was said to have improperly paid dividends on its own stock to the benefit of Alleghany. This contention, the commission held, is one for the courts to settle, and it found that Alleghany should be treated as any other creditor with equivalent claims. The modified plan does, however, limit the influence that Alleghany can exert in the new company to that resulting from its ownership of a substantial part of the old company's convertible bonds, through which it is allotted 5.4 per cent of the total voting power of the new company. Moreover, the commission did not approve that part of the compromise plan which would have allowed Alleghany to name one of the five reorganization managers and two of the 15 directors.

In view of contentions that the road's increased earnings and improved position, as compared to the situation when the 1940 plan was approved, justify a larger capitalization of the new company, with more liberal treatment of junior creditors and stockholders, the commission in its report restated in some detail the principles governing it in fixing new company capitalizations. The reorganized company, it said, should be able to meet its obligations and accomplish necessary financing during periods of depression as well as of high earnings, so its capitalization should be based on earning power as shown over a period long enough to include times of both high and low earnings. "Reorganizations should remove rather than perpetuate the cause of bankruptcy," it continued, "and should not be a means of misleading old and new investors. That desired effect can result only if the new securities are so related in character and total amount to the ability of the reorganized company to pay interest and dividends that such securities possess an actual value and not merely one that is speculative."

New securities and cash are allotted under the modified plan as follows for each \$1,000 principal amount of claim:

Debt	Cash	First mtg. bonds	Gen'l. mtg. bonds	5% pref. stock	"A" common stock	"B" common stock	"B" stock warn'ts
R.F.C. loan	\$230	\$1,000	...	...	...	...	...
Bank loans	253	1,000	...	...	...	...	...
R.R. Credit Corp.	1	1,000	...	...	...	...	...
M.P. 1st ref. 5s*	72	400	\$531	\$222	\$276	...	...
M.P. gen'l. 4s	...	...	...	...	1,393	...	...
M.P. serial 5s	...	...	...	...	750	\$300	4.19
M.P. conv. 5½s	...	...	...	...	...	1,000	8.39
R. & G. div. 4s†	6	400	...	...	...	...	...
C. & Thebes 1st 4s	100	750	283	...	...	...	...
L.R. H.S. & W. 4s	...	...	600	720	...	...	...
Boonv. St.L. & S.†	50	274	...	274	...	...	...
Cent. Br. U.P. 4s	60	370	680	253	...	...	...
N.O.T. & M. 1st*	85	630	583	...	...	...	...
N.O.T. & M. inco.*	74	551	511	...	...	...	...
" stock	...	...	...	...	...	...	...
I.G.N. 1st. mtg.*	125	120	680	240	250	500	3.75
" adj. 6s	...	...	...	...	475	500	4.28

* Allotments vary slightly with maturity dates and interest rates of various classes of the security; cash payment is in lieu of certain optional new securities.

† Plus additional provisions.

Seaboard Organizes Its Planning

Engages in systematic study of economic and technical problems and opportunities—Departments which will apply the analyses participate in making them

By Warren T. White,
Special Assistant to Receivers, S. A. L.

ALTHOUGH less than a year old, the Department of Research Planning and Budgetary Control on the Seaboard Air Line Railway is making good progress in its various studies relating to the road's operations under both present and anticipated postwar conditions. Created in September, 1943, the department is headed by L. L. Knight, chief of research, planning and budgetary control. This department and the Committee of Research, Planning and Budgetary Control, of which Mr. Knight is chairman, are concerned with the development and improvement of the property to the end that the Seaboard may render the best possible service to its patrons. Associated with Mr. Knight on the Committee are the heads of the finance and accounting, freight traffic, passenger traffic, operating, and other administrative departments.

Among the duties with which the department is charged are studies which involve skill in interpretive analysis. While in most instances the subjects for study are selected by the department or the Committee, some subjects are listed for study at the request of the executive department.

Using Departments Join in the Research

The Committee meets twice a month and, generally, a full day is devoted to the docket. As a rule, the Committee, when undertaking a study selects a sub-committee consisting of those members of the whole Committee whose respective departments are more directly concerned with the subject to be considered. Mr. Knight is ex-officio a member of all sub-committees. Upon completion of the study, the report of the sub-committee is sent to each member of the full Committee for his advance information and consideration. At the next meeting of the full Committee, the sub-committee's report is discussed and, if approved, the chairman prepares and submits to the receivers a report from the full Committee which embodies that Committee's recommendations. By having the Committee's work so arranged and organized, it is possible for several studies to be progressed simultaneously.

Several distinct advantages flow from having the heads of the administrative departments serve as mem-

bers of the full Committee. Inasmuch as copies of all proposed reports are sent to members, the Committee has the benefit of the views and suggestions of all department heads, although in some instances the subject under study may directly affect only some of the departments. At the same time all department heads are kept informed currently of pending developments which relate to the railroad as a whole and which often indicate policy trends.

The Committee's scope of activities is system-wide and most of its studies thus far have been of subjects which have a bearing on system operations.

Requests for capital expenditures originate with the operating, engineering, mechanical and other administrative departments. These are assembled and reviewed by the Research, Planning and Budgetary Control Department, and are then referred to the Committee for study, following which the proposed budget, with appropriate supporting details and the Committee's recommendation thereon, is transmitted to the receivers by the chairman.

As a result of a study recently completed, there has been put into effect an improved method for the budgeting and control of operating expenses. In brief, this plan provides for the budgeting and accounting for expenses of the several classes separately, by departments, and, for expenses incurred by the operating departments, by operating divisions. An important feature of the plan is its provision for the budget requests arising on the divisions to be passed upon initially by a division budget committee, headed by the superintendent, and on which other officers, including the division engineer, master mechanic and division auditor serve.

Some of the Problems Being Studied

As would be expected at this time, a sizeable portion of the Committee's efforts have been directed toward an appraisal of postwar conditions and their probable effect on railroad transportation. With the cessation of hostilities and the coming of peace-time conditions, a change in both the volume and composition of the Seaboard's traffic is expected. Anticipating keen competition from other forms of transportation in the postwar era, considerable study is being given to means for im-



L. L. Knight



Warren T. White

proving the road's services. The Seaboard has for some time operated various highway truck routes as auxiliaries to its railway system, and the Committee is now considering whether additional possibilities for further coordinated service of that type exist. It is also giving close attention to the question of motive power to determine whether some of the road's heavier steam power should be further modernized, as well as continuing its study of the relative advantages of Diesel power and modern steam power, with a view to employing each type of power on those districts which offer the greatest opportunity for capitalizing upon each type's respective advantages.

Under the Committee's sponsorship, a test of radio communication is being conducted at this time over various parts of the system. The present tests will cover end-to-end train communication and operations in large yards, and it is likely that tests will be shortly arranged for communication by radio from train to train and between trains and wayside stations.

The subject of employer-employee relations is also under study and means for strengthening those relations are being considered.

One of the more important studies upon which the Committee is engaged has to do with the postwar passenger traffic prospects. After making detailed investigations of various phases of this question, the Committee is impressed with the ability of railroads to compete for a large segment of passenger travel through the medium of low fares, fast schedules, and thoroughly modern equipment.

One of the studies already concluded relates to boiler water treatment. As a result of the improved and new practices put into effect upon the Committee's recommendation, substantial economies will be realized in steam locomotive maintenance and fuel consumption.

A large number of studies are now being progressed under the Committee's direction, but those already mentioned serve to indicate the general nature and scope of the remaining subjects. With the period of organization already passed, and with sub-committees functioning effectively, the Committee expects to be able materially to reduce the time heretofore consumed in the completion of individual studies.

I. C. C. Modifies Frisco Reorganization

WASHINGTON, D. C.

THE Interstate Commerce Commission has made public a further modified plan for the reorganization of the St. Louis-San Francisco in which consideration has been given objections made by the court to the plan previously proposed, and also to the elimination of claims of the Reconstruction Finance Corporation and the Railroad Credit Corporation through settlements effected by the trustees out of earnings available since the former plan was advanced.

The plan now approved differs only in minor details from the suggestions made by three bondholders' committees at a commission hearing on February 16. New capitalization and charges do not vary greatly from the provisions of the commission's earlier plan—outlined in *Railway Age* of July 20, 1940, page 112—but substantial departures are made in the allocation of new securities to creditors of the old company, largely as a result of the settlement of the R. F. C. and R. C. C. claims in the

meantime. The commission again has held the equities of holders of the outstanding preferred and common stock to be without value.

As now modified, the plan calls for a total capitalization of \$247,838,808, as compared to \$240,000,004 under the plan of 1940; annual charges are somewhat higher under the new plan, but regular capital fund appropriations are materially lower. Undisturbed equipment obligations, which amounted to \$5,874,000 under the 1940 plan, have been reduced to \$2,986,000. The total fixed-interest debt, including equipment obligations, was set at \$75,685,319 under the earlier plan, while it is \$76,371,342 under the revised proposal. Contingent indebtedness of \$40,385,885 was provided in 1940, while the 1944 plan calls for \$47,549,826 of such obligations.

Only slight changes were made in the stock issues set up under the two plans. Preferred stock in the amount of \$61,846,169 was called for in 1940, and \$61,859,782 is provided under the 1944 plan. The respective figures for common stock (without par value, but taken at \$50 per share) and \$62,082,631 and \$62,057,858.

In returning the plan of 1940 to the commission for further consideration, the federal court had found that the priorities given the claims of the R. F. C. and R. C. C. therein could not be sustained on the ground that there were special equities arising in their favor. It also found that the claims of holders of 100 shares of Kansas City, Fort Scott & Memphis preferred could not properly be disposed of as the commission had provided. The former situation having been eliminated by the trustees' purchase for cash of the total of the claims of the two creditors specified, and the latter being a small claim that can be disposed of as the court directs, either through cash settlement or allocation of additional securities, the commission held that the court's requirements have been met.

Larger Capitalization Urged

In addition, in returning the plan to the commission, the court had suggested that consideration be given to a number of other matters, including (1) a later effective date, (2) objections of the debtor company to the sharply reduced total capitalization, wiping out former equities, (3) prospective earnings, and (4) expenditures for maintenance and betterments during the interval the road was under court control. The commission's latest proposal accepts the suggestion that the previously established effective date be modified, and leaves it to the court to fix the exact date of consummation of the reorganization.

In its report the commission examines at some length the contentions advanced, particularly by the debtor company, against the capital reductions called for in the 1940 plan. The debtor company suggested a new company capitalization of slightly over \$400,000,000, in contrast to the \$240,000,004 which the commission approved. In support of the larger capitalization, it was argued, the report explains, that "money and property paid into a corporation may be lawfully capitalized; that Congress has not yet given any agency authority to limit the capitalization of the debtor to an aggregate of less than what would be lawful under the laws of Missouri; that if Congress should think that it is in the public interest to do so, it would require the exercise of a legislative power not delegable to any administrative commission; and that there need be no occasion for the capitalization of the reorganized debtor at any less amount than that at which it could be lawfully capitalized under the Missouri law."

(Continued on page 164)

Employee Recruiting and Training

Supervisory officers in operating departments must pay attention to the subject as never before

THE railroads have not been negligent or dilatory in their recruiting activities. As the pool of available labor became lower and finally touched bottom, the government took complete control of the available supply. Various reports and statements were required of industry and later of the railroads. Two of these were known as the Manning Table and the Replacement Schedule. Because of the great amount of labor entailed in the compilation of the statistics for these reports, the railroads were exempted from making them until the latter part of 1943, when they were requested to submit replacement schedules, but were relieved of the requirement to submit manning tables.

Because of changes in the selective service regulations from time to time, since the filing of the replacement schedules, not all local draft boards have followed the schedules and, because of changes in the labor situation on the railroads, many employees who were listed for replacement on the schedule within the first six months (to comply with the regulations) cannot be replaced. The railroad that has a replacement schedule on file is thus faced with the problem of getting a revision upward in order not to lose irreplaceable employees. In the final analysis, under the Selective Service law, the local draft board is the absolute authority, as far as inductions and deferments are concerned. The replacement schedule becomes a guide, but not an instruction, in that it can be followed or not, as the board decides. An employee can be taken sooner than listed, but it is difficult to hold him beyond the date shown on the schedule.

Recruiting Methods

What are some of the recruiting methods now being followed by the railroads? First and most successful in results has been the establishment of recruiting offices by the railroads themselves, entirely apart from the government recruiting offices, but working, of necessity, in close cooperation with the U. S. E. S. and R. R. B. local offices. The number of vacancies actually filled by referral to the R. R. B. offices has generally been very small because of the very few available men. This is no reflection on the activities of the R. R. B. The legal offices have done what they could, but the supply has been too limited.

The R. R. B. has done much newspaper advertising, and the railroads have advertised in local and metropolitan papers with varying results. The radio has also been used extensively, but the results from this source of advertising have been disappointing.

The railroads have also used private employment agencies, whenever and wherever available. Next to their own employment agencies, these private agencies have been the best source of labor—mostly common labor, however. Very few laborers are now available. With contract labor, the living quarters and the food supplied have always been the biggest factor in the stability of

the workers. The better the living conditions and the better the food, the better the class of labor secured, and the smaller the turnover.

As the labor situation became more critical, especially in the maintenance of way department, the railroads have resorted more and more to the use of machines to replace manpower, wherever such use was feasible. The saving of manpower by this means has been a big factor in the ability of the railroads to continue to maintain their tracks and structures in safe condition during the growing manpower shortage and to carry the greatly increased traffic load due to the war.

Women have been recruited for many jobs heretofore thought possible to be filled only by men. Women are being used in all departments, even in train service, both road and yard.

"Upgrading" of Employees

Because of the critical situation which arose last year, and is still critical in the maintenance of way department, arrangements were made by the United States government with Mexico for the transfer of Mexican nationals to the United States for labor on the railroads, and they are being used on some railroads, not only as track laborers, but also as freight handlers and shop laborers. The supply is quite limited, and not all of the railroads desiring to use Mexicans will be able to get them or as many as requested.

Much has been accomplished, particularly in the maintenance of equipment department on the railroads, by "upgrading" apprentices and helpers to mechanics, and laborers to helpers. But this relief has been only temporary. The apprentices upgraded to mechanics were in the lower age brackets, for whom deferments were difficult to get, so many of them were lost to the armed services by induction or enlistment. As the Navy has been taking boys 17 years of age and the Army boys of 18, the boys who otherwise would have been available to fill the ranks of apprentices, and so keep up the supply of mechanics, went into the armed services; only the few who could not pass the examinations for the Army or Navy were left. Likewise, the boys who might have been available as laborers were entering the armed services, and the older men who could have filled the ranks of laborers went into the war industries at war wages.

Other Recruiting Measures

Other solutions for the manpower shortage have been tried by the railroads, such as raising the age limits for employment and easing the physical requirements, thus making available older and physically inferior men; also returning service men who had been retired and were still in good physical condition, and willing to return to service; and encouraging employees in good physical condition, old enough to retire, to remain in service for the duration. These two expedients, however, really gave little relief as the number of employees retired, who

NOTE: This article is derived from a report presented before the American Association of Railroad Superintendents by a committee of which W. C. Barrett, chief of personnel, Lehigh Valley, Bethlehem, Pa., was chairman.

were available for return to service, was very small, and very few men wanted to remain in the service after becoming eligible for retirement.

Some railroads, in states where their employment is permissible, have found some relief in the use of boys under 18 years of age, at hours and on days when schools were not in session. Also in some localities, older men, merchants and others have worked on the railroads on Saturday and Sunday, but the relief from these sources was temporary.

Absenteeism and Turnover

Absenteeism and turnover have been serious obstacles to the maintenance of a sufficient supply of labor on the railroads. All sorts of alibis have been used to justify absenteeism. Labor has in many places assumed an independent attitude and has restless feet, as jobs are plentiful and wages good everywhere. The common labor turnover has been tremendous.

On some railroads, absenteeism and turnover have been controlled somewhat by assigning a personnel officer to handle these special problems, along with recruiting employees.

The real manpower problem on most railroads is the ability to keep the men they now have. Every such employee taken by the armed services means a shortage in that particular group and the necessity for increasing the burden on those remaining. The real reason why the railroads have been able to continue to function so efficiently with the reduced manpower has been the willingness of the employees in all departments and services to work long hours and double shifts. They were paid, of course, for the overtime work at the overtime rate. The cost to the railroads, therefore, has been greatly increased, but the expense of the operations has not deterred the railroads or been used as an excuse for failure to function.

The regulation promulgated by the director of selective service, practically eliminating deferments for men between 18 and 26 years of age, will bear heavily on the railroads if it is not modified for their benefit.

Many industries and some railroads have established training programs, and are getting results of varying value. Most of these programs are aimed at improving the character and efficiency of supervision, to the end that the rank and file may be better supervised and better handled. In other words, the training programs are aimed at better employer-employee relations—giving the employee a better understanding of his job, how it fits in with the complete program of the industry, and its importance to the finished product, and just now to the winning of the war; to improve morale as well as output.

Governmental Agencies for Training

The value of training in industry, therefore, does not lie primarily in its ability to increase the total number of employees—it cannot do that—but in its ability to increase the efficiency of the individual employee and, in this way, increase the output per employee, thereby accomplishing to some extent the same end as though the number of employees had actually been increased.

The War Manpower Commission has recently established a Bureau of Training in the Division of Transport Personnel, Office of Defense Transportation. The constituent agencies of this bureau of training include Apprentice Training Service (ATS); Engineering, Science and Management War Training (ESMWWT); Training within Industry (TWI); and Vocational Training for

War Production Workers (VTWPW). The services offered by these agencies are provided by the Federal Government without cost to the war industries, including the railroads. A close relationship is maintained between the constituent agencies of the Bureau of Training and the United States Employment Service.

The functions of training are directed from twelve regional offices and a larger number of area offices in strategic war production communities. Training programs can be developed for the transportation industry when and where needed, by the regional chief of training and the training agencies through a cooperative arrangement with the industry.

One of the agencies, that of Vocational Training for Transportation Workers, has been used by some railroads, with varying success. The principal drawback appears to be the almost universal demand of workers for pay while being trained. The government provides the school and the instructors through arrangements with local vocational schools already operating for public school students.

The government also furnishes transportation to and from these schools for any workers who will attend. But the workers invariably look to the interested industry to pay them for the time spent in attending the school.

Railroad Training Agencies

Some railroads have established their own training organizations and prepared their own programs. These have been uniformly successful, beginning with the supervision and extending to the rank and file, especially the newer employees. But, here again the question of pay for the time taken enters. In most instances, the training must be on company time, or if for the rank and file and held out of work hours, the time must be paid for.

Some railroads have contracted with private agencies for training programs, and these have given fairly satisfactory results. The agency supplies the courses and, if desired, also instructors, or the course can be bought and used as may be found desirable by the supervising officers of the company. These private agency programs are largely prepared for the supervision, the supervisor to pass the training on to the rank and file.

Training in the railroad industry is of importance and should have a wider use. It will make for greater efficiency and increased output per employee, thereby to some extent helping to make it possible for the railroads to continue to function with a lesser number of employees. It is one answer to the problem of manpower shortage. Recruiting is another answer. But neither of these expedients can produce manpower where it does not exist; and too much dependence must not be placed on training to solve the manpower problem.

It is the considered opinion of this committee that the time has come when greater consideration must be given to the manpower needs of the railroads by the government agencies having to do with recruitments for the armed services and the allotment of manpower to the railroads, the war industries and the farms. We recognize that to win the war we must have a sufficiently large army, navy and air force. But getting the men, materials and implements of war to the places where they are needed is just as important as getting the men. The railroads are the vital transportation agency for the movement of the men, materials and implements of war to the areas where they are needed. They must continue to function if the war is to be won. The production of food and the production of the materials and implements of war are important. But production is useless without transportation.

Jersey Central

Trains

Its Supervisors

"IF I was treated like those guys, somebody would get a punch on the nose." Such was one yardmaster's reaction after seeing portrayed on a slide film the wrong way to break in a new employee—one of a dozen topics thus presented by the Central of New Jersey in an intensive, well-rounded program for the training of supervisors.

Through this sound-slide portrayal, the yardmaster had just seen graphically illustrated the wrong and confusing way that some supervisors start a new worker on the job. The yardmaster and other members of his group were discussing what was wrong. The right way then was illustrated, giving the group a chance to check its analysis, and to engage in further discussion and note-taking on application of these basic principles to their own operations, thus profiting by each other's experience.

The sound-slide technique, with the accompanying conference table discussion, has been used by some railroads to get at particular problems, such as instruction in safety and on operating rules, but the makers say the Jersey Central is the first railroad to start a complete visual training program on the handling of men. Every one of the railroad's 600 officers, principal supervisors and supervisory clerks is participating in the program, which has been established to improve supervisory efficiency in all its aspects, including such diverse problems as safety and how to plan a day's in order to have time for everything that needs to be done.

"It is our supervisors' business to know their work and, generally speaking, we believe they do know it," William Wyer, chief executive officer, said in the "Jersey Central Coupler" in one of his recent monthly reports to the employees. "However, it also is part of their duties to be good, intelligent leaders. We believe all of them wish to be just that, and some of them are. Unfortunately, however, many have been handicapped by lack of opportunity. The company is remedying this in the thought that every employee stands to gain directly, and the company indirectly, by the adoption of modern supervisory methods, which are all based on plain common sense."

The overall program is in charge of Joseph Lloyd, a mechanical department foreman who was borrowed for the purpose, and who "doubles" as a conference leader for some of his department's meetings. One topic is presented each month, and every officer or supervisor is earmarked for a specific group. This means everybody—including even the department heads reporting to the chief executive officer, who is also attending the sessions.



C. N. J. Officers Shown at a Training Session

(Left to right): F. E. Gregg, comptroller; E. A. Workman, purchasing agent; Walter P. Gardner, trustee; William F. Hanlon, assistant general solicitor, and Joseph Lloyd, in general charge of the program.

There are 39 of these monthly group meetings, which are held at a total of eight strategic on-line New Jersey or Pennsylvania locations in order to permit everyone to attend conveniently. The sessions are held either during working hours or in off-hours, depending on whichever works out best for the men involved. Each group has its conference leader, whose aim is, not to act as a teacher, but to induce full group participation to the mutual profit of all concerned. The group leaders themselves get together between sessions, in order to discuss results of previous conferences and to plan for the new one.

There were the customary qualms when the possibility of such a program was first discussed. Some advance speculation arose as to whether long-time employees—particularly those near pension age—would be interested. The attitude of such supervisors as yardmasters also was the subject of speculation, since they might be assumed to be concerned with the mechanics of operation rather than the niceties of leadership. But all of these fears have proved groundless. It has been discovered that self-improvement, when the opportunity is given, needs no sales talk.

Indelible Impressions

"The men of 60 or 65 are just as interested as anybody else," Mr. Lloyd reports. "Men whose interest one would least suspect are taking leading parts in the discussions. Best of all, this interest doesn't die when the meeting is over. You couldn't prevent them from continuing their talk afterward even if you desired to."

The first discussion brought out that the new employee's first-day impressions are indelible ones. The point is easily proved, since few people are unable to recall their first time on the job, and the confusion that surrounded it, unless the supervision was unusual. Therefore, in every department there should be a regular plan for inducting the new employee.

It was brought out that the new man should be greeted

cordially and treated like a gentleman, that a sincere interest should be displayed in him and that there should be a full explanation of the part he will play in the overall picture so that he will realize the importance of his job. He should be conducted to the site of his new job and not just be told to find it, with resultant confusion, inefficiency, possible accidents, and poor impressions. He should be introduced properly to the men he will work with, the right man should be selected to instruct him, and there should be a regular follow-up instead of forgetting him. Such practices are basic, but are too often forgotten. It is also pointed out that to both the employees and the general public, every officer or supervisor is the railroad and that the railroad is judged by him.

Subsequent subjects include such points as the way to adjust grievances, the right and wrong in reprimands, the importance of explaining the "why" of things rather than just giving orders, the necessity of avoiding favoritism, the special problems involved in supervision of women, and how to get production results. To make certain the points are not forgotten, a summary is given every participant in every session so he may keep it as a blueprint for future guidance. Space is provided for notes on the participant's particular problems, as brought out in the discussions.

Started frankly as an experiment, the program gained ready general acceptance. Even the hot weather has proved no deterrent—the men, from general officers down, peeled off their coats and went right on discussing. It has proved to Jersey Central officers that the basic reason for justifiable resentments against supervisors is that the supervisors, many of whom left school early and who have been concerned with physical operations ever since, never were given the opportunity to know better. Because groups frequently are made up from a number of departments, the program also is improving departmental and intra-departmental relations through new appreciation of the other fellow's problems. It also is expected to help general public relations, since diplomatic supervisors naturally would be diplomatic to the public.

Frisco Reorganization

(Continued from page 160)

Pointing out that the book value of the "unimpaired capitalization" of the old company was "only a little more than \$300,000,000," the commission held, after reviewing these contentions, that "the record of the property after nearly 12 years in the custody of the court would seem to make it clear that an increase in capitalization would be unreasonable and that a substantial reduction in capitalization is required." It did, however, consider that the improved condition of the road, its unusual expenditures for maintenance and betterments, the new sources of traffic that have been opened up, and its prospective earnings, would justify an increase in the amount of the new capitalization to the extent suggested by the bondholders' committees, that is, about \$7,838,800 over the total fixed under the 1940 plan.

While the 1940 plan had provided for Birmingham division first mortgage and second mortgage 4 per cent bonds to be exchanged for then outstanding Kansas City, Memphis & Birmingham issues, these bonds have since been retired, so no such provision is required in the modified plan. New fixed-interest obligations, therefore, are limited to one issue, \$73,385,342 of first mortgage 4 per cent 50-year bonds. The new company's contingent-interest obligations also are limited to one issue, \$47,549,

826 of second mortgage 4½ per cent 75-year income bonds.

The revised plan thus sets up fixed interest charges of \$3,001,773 per annum and contingent interest charges of \$2,139,742. In addition, sinking fund allocations of \$421,212 yearly are provided. A feature of the plan that distinguishes it from other reorganization plans formulated by the commission is the provision of a special reserve fund in lieu of that type of capital fund which, with or without a payment from available income, operates to reserve for debt reduction sums related to depreciation and property retirement charges. This special reserve, according to the report, is, as replenished from time to time from available net income, "intended to provide cash, when not available from other sources, for payment of fixed charges or for capital expenditures. In view of recent changes in our accounting regulations requiring depreciation accounting for roadway accounts," says the commission, "we are of the view that the special reserve fund may be approved in this case." An initial appropriation of \$500,000 to this reserve is required; its use is made subject to certain conditions; and the plan further provides that no common stock dividend shall be paid at any time unless the cash value of the special fund is at least \$500,000.

Under the revised plan, annual requirements for the preferred stock dividend are \$3,092,989. Annual charges before common dividends thus would amount to \$8,655,716. The plan provides that all preferred and common stock shall be deposited in a voting trust, which is to continue for 5 years from the date of consummation of the reorganization, and the voting trustees are to select the board of directors, except that the first board of directors is to be named by the reorganization managers, with the approval of the court.

The modified plan calls for the distribution of cash and new securities per \$1,000 principal amount of old company bonds as follows:

	Cash	1st mtge. bonds	2nd mtge. bonds	Preferred Stock	Shares Common Stock
Fort Scott 4's	\$61.34	\$733	\$267	...	...
Prior lien 4's, series A	15.36	219	171	\$332	6.67
Prior lien 5's, series B	25.39	233	182	353	7.10
Consolidated 4½'s, series A	21.05	221	158	174	3.48
Consolidated 6's, series B	36.22	243	174	191	3.83

Through claims based on 6 per cent loans made in 1932, six banks also are authorized to participate in the distribution of cash and new securities under the revised plan, on a somewhat more generous basis than the 1940 plan provided. The largest of these bank loans was that of the Chase National Bank amounting to \$2,492,592, on which unpaid interest to the amount of \$1,042,386 had accrued as of December 31, 1943. The total provision to meet this claim under the modified plan is \$3,344,708, of which \$151,526 is in cash and \$1,016,590 in fixed-interest 4 per cent bonds.

Communications . . .

Rail Detector Cars

HOBOKEN, N. J.

TO THE EDITOR:

The recent letter by Prof. Hempstead S. Bull of the Department of Electrical Engineering, University of Michigan, published in your issue of May 13, which dealt with the problems that will confront the railroads in the post-war period, and which implied that "too many" railway executives are characterized by "mental

inertia," was undoubtedly well-intentioned, but apparently Prof. Bull is not in possession of all the facts, especially those concerned with the testing of rails to locate internal defects.

Prof. Bull stated that: "There is need for better methods of detecting rail fissures and other forms of incipient defects." The original detector car that was developed to detect rail defects by the late Dr. Elmer A. Sperry and H. C. Drake, now director of research of Sperry Rail Service, was designed primarily for the detection of transverse fissures. Since then, as a result of research carried on over a period of 15 years, more than 45 major improvements have been incorporated in Sperry cars, as a consequence of which, in addition to transverse fissures, they are also detecting compound fractures, engine-burn fractures, horizontal and vertical split heads, and miscellaneous defects. Owing to the improvements made, these cars are now providing the railroads with a rail protection service that is 94 per cent efficient (service failures vs. total failures).

Prof. Bull also said: "The detector cars now coming into use represent an important advance in testing technic but their most staunch admirers will be the last to claim that these devices are incapable of being still further improved." In view of the fact that detector cars have been in operation for at least 15 years, such a statement as "now coming into use" would be amusing if it were not so misleading and uninformed. We will agree that, given the required time, effort, etc., almost anything can be improved. In addition to the refinements already made in detector cars as compared with earlier models further improvements of demonstrated value are to be incorporated in them as soon as conditions permit.

In defense of railroad management, it is our opinion that the majority of the railroads have a progressive policy regarding rail testing, and that all the railroads are doing a tremendous job, and doing it well. They are getting their job done on time. In the last analysis, results are what counts—not opinions. To accuse them of complacency is both incorrect and unfair. When the time comes, the railroads will face their post-war problems and do as good a job then as they are doing today.

R. D. LA FOND
Director of Public Relations, Sperry Rail Service

ment has come into play primarily because it reduces packing cost as well as weight on which shippers pay revenue.

3. What Rate Structure?

There will be continued need in the post-war period for a flexible rate structure; almost a revolutionary revision of past rate structures. The greatest danger I foresee is the tendency of the Interstate Commerce Commission to freeze rate structures by scales all related to first class on a statistician's theory of apportionment of cost plus expenses, taxes, and return on investment—with little, if any, regard to the fact that from two-thirds to three-quarters of the average revenue a railroad needs to be a going concern must be apportioned to traffic without regard to cost of transportation, and only between one-quarter and one-third of revenue goes to pay cost. By cost I do not mean expenses which do not vary appreciably with fluctuation in volume.

Am surprised that so many executives lean to trainload rates. I rather agree with the traffic vice-president who says, "Trainload rates seem logical enough (to the thoughtless), but I am sure that sooner or later the I.C.C. will ban them as discriminatory." The parenthetical insertion is mine. It is doubtful that there is any appreciable economy in long-haul trainload rates. Outside of terminal services (and there are not many places where you could get a full trainload from a single industry to a single industry daily), it is highly probable that the added cost of specialized placement, specialized billing, and specialized handling in trainload units of a single shipper's goods would offset any economy of trainload movements. The ideal situation for main-line-haul volume traffic is to have it offered daily as needed and not have it held back to accumulate trainloads, thus creating either a feast or a famine from day to day.

In my opinion, lower rates based upon a minimum monthly or annual movement from one shipper to one consignee are easier to justify than so-called trainload rates, which may mean a train moving one day and none for another six months. Undoubtedly, if a railroad knows that over a period of weeks it will have a regular minimum volume of certain traffic it can effect economies in handling that could be shared with the shipper. Such an arrangement would be comparable with a "stand-by" or "readiness to serve" charge that has long been recognized among other utilities such as electric, gas, and water companies.

There is merit in the dual rate idea, both for carload and less-carload traffic, if sound judgment is used in determining the spread between the lighter and the heavier quantity. Very little real study has been given by railroads to the variation in cost of handling freight in varying quantities. Most railroad men, as well as shippers, I believe, have an exaggerated idea of the economy of heavier carloading. There is danger of passing on a greater reduction in the freight rate for heavier loading than the saving in cost.

Dual rates, either carload or less-carload, are very dangerous and ought not to be indulged in without a very clear understanding of the consequences, not only from net revenue angle but from the competitive angle. The tendency has been, and undoubtedly will be, for the lowest rate and lowest minimum to become the ultimate rate under a competitive system. Or the alternative—if these spreads exceed the economy of the heavier quantity lot—the interposition of the transportation broker consolidating smaller lots into larger lots, sharing the reduction in the freight rate with the shippers with resultant shrinkage in railroad net revenues, as has happened quite generally over the country with the great increase in the spread between carload and less-carload merchandise rates in the past thirty years.

4. Post-War Service

Experience has demonstrated that for the great bulk of the traffic daily moving the shipper will pay little, if any, premium for superior service but will not use an inferior service.

5. Merchandising the Service

One of the greatest needs of the country is railroad solicitors who know something about the economics of the business they are engaged in. There are entirely too many railroad solicitors of all types who have little foundation for their work but have been employed because they are good mixers and have a good approach but are without education on the fundamental fact that the railroads are in the business to make a profit, not necessarily purely for the sake of hauling cars.

RATE-MAKER

Caution Needed in Rate Innovations

To THE EDITOR:

I thought you might be interested in the comments of an ordinary rate-maker, not an executive, on the problems discussed in the article in the *Railway Age Freight Progress Annual* of May 20, 1944, entitled, "What of the Future?", particularly that sub-section entitled, "What Rate Structure?", dealing incidentally only with the other sub-sections in their order as presented.

1. Competition

Competition will be about the same as prior to the war. Its intensity will depend on the volume of available traffic. If the available traffic is light, as it was in the Thirties, it will be intense, tempered so far as rate-cutting is concerned by regulations now imposed on all transportation agencies except airways. Airways for some time will not be a serious factor except for passenger traffic and higher grade express traffic. The danger is that, with a lessened volume of traffic, none will make a profit and the railroads with their large fixed burden of taxes, maintenance, and the like—which must be borne whether they haul the traffic or not—will be in trouble again. The others, with limited fixed maintenance and taxes, except as they haul traffic, will be less burdened. Labor costs of water carriers and truckers should cause them to be slow about rate-cutting.

2. What Kinds of Equipment?

Railway equipment people should as promptly as practical take full advantage of lighter-weight materials to reduce the non-revenue load. Revenue loading will not be appreciably greater than pre-war; therefore, the problem is to reduce the non-revenue weight hauled. I am not enthusiastic about special equipment for single types of traffic. It usually means added investment, increased empty car-haul, and reduced revenue weight. This special equip-

Railroads-in-War News

Urge Holding Onto War-time Efficiency

Betts sees shipper benefits therein—Keeler fears socialization

The transportation savings effected by shippers and railroads during the war should be maintained in the post-war period for the benefit of shippers and railroads, L. M. Betts, manager of the Railroad Relations Section of the Association of American Railroads, told members of the Mid-West Shippers Advisory Board at its sixty-seventh regular meeting at Chicago on July 13. By increasing the tonnage per car, he said, the shippers have saved 866,000 cars, which is the equivalent of adding 32,400 cars to the supply. As a result, the railroads were not required to make large capital expenditures, which, at \$3,000 per car, would have totaled more than 96,000,000.

Load per Car at Maximum—Mr. Betts warned that, because the effectiveness of heavier loading has reached its peak, it will be necessary to increase the usage of cars by reducing the time held, if traffic continues to increase. He anticipated that only about 30,000 new cars would be delivered to the railroads this year and that the demands of the War Department will cause car shortages. On one occasion recently, he said, railroads were asked to furnish on short notice 2,500 flat cars for the movement of impedimenta to ports of embarkation.

Other speakers at the meeting included J. W. Stevenson, passenger traffic manager of the Illinois Central; T. J. O'Shaughnessy, public relations officer of the Chicago, Rock Island & Pacific; and John P. Keeler, president of the National Industrial Traffic League, the guest speaker at a joint luncheon with the Traffic Club of Chicago.

Mr. O'Shaughnessy said that the railroads are confronted with many serious problems, the greatest of which is the replacement of equipment and properties that are wearing out faster than ever before. They cannot secure badly needed material, he continued, and the present system of taxation does not permit reserves to be set aside for purchases and replacements following the war. More than 20 cents out of every dollar the railroads receive is taken by the tax collector, he said. Every dollar the railroads receive from any source for the first 76 days of the year go to the tax collector. The railroads pay more money in taxes than they expend for coal, oil, timber, and all of the 85,000 different things that are required in railroad operation. The yearly tax bill at the present time is greater than the total of the bills for all these things combined, Mr.

O'Shaughnessy told the Advisory Board.

Federal Ownership Threatened—Mr. Keeler was of the opinion that government ownership of the railroads may become a definite threat in the post-war period. Among the threats to railroads after the war, he cited marine equipment that will be sold by the government, a larger number of airplanes and trucks that will be available and the expansion of waterways. He said the railroads have spent too little time in determining where ton-miles have been lost. He advocated the repeal of land grant rates, the abolition of political rate making, fourth section relief, the restriction of waterway development and some aid to airlines.

Former Railroader Supervises Freight Job in Britain

A major task of the Transportation Corps is that of moving war supplies throughout Great Britain. From Headquarters, in the European Theater of Operations, comes word that chief of the Freight Branch, Movements Division, in that area, is Major E. H. Boykin, formerly with the Louisville & Nashville, who with his assistants works under Major General Frank B. Ross, chief of transportation, E. T. O.

Detailed daily reports are maintained by the Freight branch, and Major Boykin is responsible for administration and training of all military and civilian personnel assigned to his branch. Reports are studied, specifying cargo to be shipped, final destination, method of loading, day and time of departure from the United States and expected arrival at British ports. Delivery to proper depot is the next step, whether by train, truck or special handling.

Major Boykin heads a military personnel of 43 officers and non-coms from 16 states. Prior to joining the Army in 1942, Major Boykin had served as city freight service agent on the L. & N. 11½ years, and for 4½ years with the Luckenbach Steamship R. R.



Major E. H. Boykin

Britain's Unions Seek Socialized Transport

Would have government operate all for-hire carriers, not private trucks

The national executive committee of the British Labor Party has prepared a report on postwar transport for presentation to the next annual conference of the party, in which all-out nationalization of all forms of for-hire transportation is recommended.

The laborites maintain (says Modern Transport, London) that great changes and improvements in transportation will be necessary in the postwar period and "private enterprise, with its present form of ownership, cannot provide the requisite capital for these developments at normal interest rates." Furthermore, the unionists insist, a "unified and co-ordinated system" of transport is desirable; and "the nation cannot allow so vital a service to become a private monopoly."

What the Laborites Ask For—The unionists demand rapid adoption of new and improved devices and equipment.* They also want generous treatment of employees in the matter of wages, working conditions, security of employment opportunities for promotion, "welfare" activities, and insurance.

"To work efficiently," the unionists contend, "transport must be regarded as a whole, and the various methods should be complementary to each other rather than competitive."

The laborites propose that a national transportation monopoly be established, to be operated by a governmental "authority" consisting of an appointed board or council, on which organized labor would be one of the interests represented. Separate subordinate boards would administer the several different types of transportation, reporting to the central "authority."

The guiding principle of the proposed regime would be "to meet public needs" and not to earn profit—"although financial stability must be ensured." It is not proposed that government ownership be extended to highway private carriers, but

* The late Lord Stamp, well-known economist and president of the L. M. S., observed in his "Motive and Method in a Christian Order," pages 54 and 101, that a "planned" or socialist society—built upon establishing stability and standardization—is likely to be backward in the adoption of innovations. Committees which would have to pass upon such proposals would "play for safety" and be slow to risk money in new ventures. Other economists have observed that a socialist society will modernize itself only if there are capitalist societies around it to do the experimenting and take the chances—and produce tested results which the socialists can then imitate.—EDITOR.

only those operating for hire. A large number of Britain's trolley-car, bus, and rapid transit operations are already in socialized operation by municipalities. The laborites would bring these systems under the proposed centralized "authority" but would seek to leave them a certain degree of local autonomy.

Would Extend "Integration"—A considerable degree of "co-ordination" or "integration" among rival means of transport has been achieved in Britain during the war, and the unionists urge that this development be retained and extended after the war—rather than reverting to wasteful invasion by one form of transport of a sphere in which another agency is economically superior.

By control of capital expenditures on all forms of transport it is suggested that the proposed "authority" could compare a railway extension or improvement with suggested highway or waterway betterments—and see to it that capital resources would be divided among rival claimants in a manner to produce maximum results.

66 Trainloads of Farmhands Brought in from Mexico

An announcement by the War Food Administration has disclosed that a trainload of Mexican agricultural workers that arrived in California on July 15 was the sixty-sixth such trainload brought into this country so far in 1944. Further movements of this character are planned, so that the total number of Mexican farm workers brought into the western states for this year's harvest season will be about 75,000.

A total of 63,637 was employed in 17 states at the time the statement was prepared. This was the largest number to be in this country since the program for their importation began in September, 1942. More than half the total was in California, while Washington, Montana, Oregon, Colorado and adjacent states had been allocated several thousand each. The success of the program, carried out under the terms of an international agreement, was attributed by the W. F. A. to the cooperation of the two governments, the employers, and the Mexican and American railroads that have been handling the movement.

Use Radio Conference in O. D. T. "Don't Travel" Drive

Representatives of civic organizations, service clubs, city governments, newspapers, radio, transportation services, merchants and industrialists, according to an Office of Defense Transportation press release, gathered July 17 in 122 cities to hear a "closed-circuit" radio broadcast appeal for cooperation in the O. D. T.'s current "Don't Travel" campaign.

Using the facilities of the National Broadcasting Co., Lieut. Gen. Brehon Somervell, commander of the Army Service Forces; O. D. T. Director J. Monroe Johnson; and Mayor Fiorello H. LaGuardia of New York, president of the United States Conference of Mayors, each spoke in support of the program to limit railroad travel, and Gen. Somervell's

words, to "those who are engaged in the active prosecution of the war."

Col. Johnson gave his listeners assurances that travel rationing would be undertaken only if and when other means of solving the problem of reducing unessential travel had failed. "What we need now," he said, "is more and more co-operation. We must tighten up on our travel belts. Every one of us must strive to the point where, if we meet on train or bus, we can look each other in the eye and say: 'I am on this trip only because I am on war business.'

Mayor LaGuardia suggested that local committees be formed to promote "At Home Vacations," discourage conventions, and cut out non-essential personal travel. "The solution rests in your hands, not in Washington," he declared.

Camp Mackall Railroad Reports \$26,620 Potential Saving

A government-owned "terminal railroad" at Camp Mackall, N. C., has, since its establishment in January, 1943, earned a potential saving of \$26,620 in switching charges on loaded cars. Capt. Frank E. Kingsbury, transportation officer of the camp, cites also time-saving in switching of empties.

The railroad, with one 80-ton Baldwin steam locomotive, 4.7 miles of track in the main line and 11 spurs in the yards, has its own pit for cleaning and repair work and a large warehouse for storage. Five soldiers, under Captain Kingsbury's supervision, and that of his assistant, 2nd Lt. Helena M. Callahan, W. A. C., operate the miniature line and care for its equipment. Each man is designated for

one job, but all are interchangeable, acting as traffic managers, switchmen, brakemen, signalmen, conductors, engineers, firemen, etc. Subject to call 24 hours a day, and with a record devoid of accidents, the crew to date has handled 4,260 loaded cars. The Seaboard Air Line, which passes through the military reservation, switches Camp Mackall cars to a siding, where they are picked up by the camp's locomotive.

Army Keeps A. A. R. Container Bureau Busy

The railroads are helping the armed forces protect vital war materials in transit through the development of proper packing and crating, according to the 22nd annual report of the Freight Container Bureau of the Association of American Railroads, recently released by Edward Dahill, chief engineer of the bureau.

During recent months, it is pointed out, difficult problems have arisen in connection with the packing and handling of such delicate shipments as airplane parts, airplane pilot trainers, radio directional finding equipment, bomb fin crates, torpedo heads and jeep lamps, and the railroads, through the bureau, have been called upon to assist in keeping loss and damage to items of this sort to a minimum.

The assistance given by the bureau, according to the report, has involved preparing specifications for the packing and crating of war goods, educating members of the armed forces, and supplying information on a variety of subjects. For instance, it has conducted a series of packing, crating and carloading conferences throughout the country for military and civilian personnel at the request of both



U. S. Army Signal Corps Photo

Chief Officer and Crew of Camp Mackall "Short Line"

(Standing on ground)—transportation officer, Capt. Frank E. Kingsbury, Fayetteville, N. C.; (upper left) fireman, Cpl. Elmer Haas, Elyria, Ohio; (upper right) engineer, Cpl. Gale Hasteen, Valier, Ill.; (lower left) brakeman, Pfc. F. Baldinger, Baltimore, Md.; (lower right) superintendent and all-around-man, Sgt. Howard Walters, Spokane, Wash. T/5 Homer L. Chastian, brakeman from Atlanta, Ga., is not shown.

the Air Service Command and the Transportation Corps.

Besides helping the Army and the Navy, the report said, the Freight Container Bureau has further contributed to safe delivery of rail shipments by working in close cooperation with such agencies as the Container Division of the War Production Board and various bureaus of the Department of Agriculture. The bureau also has devoted considerable time and effort to the development of fibreboard containers as substitutes for those constructed of wood and metal.

North Western Paper Salvage Reaches 3,000,000 Lb.

More than 3,000,000 lb. of scrap paper have been returned to the nation's paper industries by the Chicago North Western since Pearl Harbor. Since December 7, 1941, according to R. L. Williams, president, the paper salvage campaign on the North Western has netted more than 1,000,000 lb. annually, while more than 1,243,000 lb. have been salvaged during the 12 month period ending June 1 of this year.

"In addition to conducting its own salvage campaign, the North Western is cooperating with state and national salvage authorities in local campaigns," he declared. "In this respect, we have selected a number of our railroad stations in communities, where there are no scrap dealers, as scrap paper depots."

Principal sources of salvaged paper include obsolete tabulating cards used in accounting department business machines, waste paper from the general as well as outlying offices, obsolete and unnecessary records and files, used passenger tickets, and newspapers and magazines discarded by passengers on trains and in stations."

Six Months Export Freight

Cars of export freight, other than coal and grain, handled at United States ports in the first half of 1944 totaled 893,855, compared with 612,974 in the same period last year, or an increase of nearly 46 per cent, according to the Association of American Railroads. Cars of grain for export in the first six months of 1944 at the ports totaled 18,746 compared with 29,055 in the same period last year, or a decrease of 35.5 per cent.

The average daily unloading of export and coastal freight at all United States ports in the first six months of 1944 was 5,044 cars, compared with 3,566 in the same period last year. This marks the first time that this average has exceeded 5,000 cars per day in the first six months of any year since the compilation of these records began.

In the month of June alone 153,216 cars of export freight, excluding coal and grain, were unloaded at all ports compared with 119,435 in June, 1943, or an increase of 28 per cent. Cars of grain for export unloaded in June this year totaled 3,255 compared with 6,504 in the same month last year, or a decrease of 50 per cent. In addition, the railroads handled 565 cars of coastal freight in June this year, compared with 711 in the same month of 1943, or a decrease of 28 per cent.

The total of 156,986 of all export and

Britain's Railway Officers Are Organizing

Initial steps have been taken in Britain toward the organization of a "Railway Officers' Guild," the object of which (says the *Railway Gazette*) "will be to safeguard the collective interests of the officers and higher administrative staff of every branch of the British railway companies, the London Passenger Transport Board, and the Railway Clearing House."

It is said that the guild is not intended to seek salary increases nor to provide for the use of the strike weapon—that is, the "guild" is not a union under a different name. Its organization comes as a result of a general feeling of apprehension as to the status of railway officers "under postwar circumstances." It is also "understood" that the chief executives of the railways have "no objection in principle" to the move.

coastal freight, excluding coal, handled through the ports in June represented an average daily unloading of 5,233 cars. June was the fourth consecutive month that a daily average of 5,000 cars has been exceeded, the peak so far having been reached in May, when the average was 5,624 cars.

Christmas Trees in Closed Cars

Railroads engaged in the movement of Christmas trees have been advised by the Car Service Division of the Association of

American Railroads that this year, again, it will not be possible to permit the use of flat and gondola cars for such traffic, since demands for such equipment for the movement of military impedimenta and other essential war program materials leave none available for that purpose.

It was pointed out that, since the experience of the past two years shows that it is entirely possible to move these trees in rough freight, plain box, or automobile cars, only equipment of this type should be furnished for the shipment of Christmas trees during the 1944 season. The Canadian railroads have concurred in this restriction, it was said.

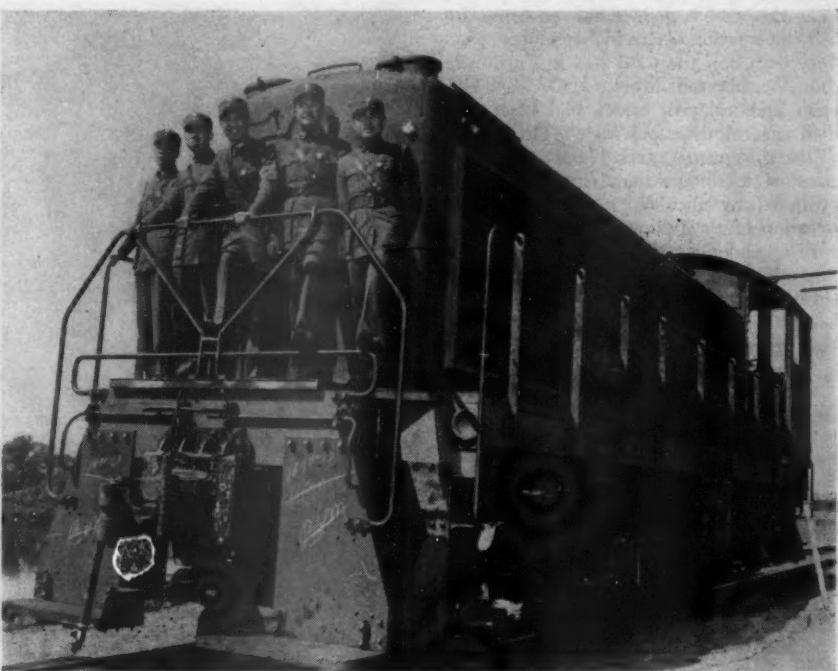
P. R. R. Adds Service Women's Lounge at Philadelphia

An attractive, comfortably fitted lounge for service women—WACS, WAVES, SPARS, Women Marines and Army and Navy Nurses—was opened by the Pennsylvania, July 15, at Broad Street Station, Philadelphia.

The fourth major facility to be installed in this station exclusively for members of the armed forces, the new five-room suite includes a dormitory for 25, showers, "powder room," clothes pressing facilities and other conveniences. A full length mirror covers the entire wall of the powder room, there is a washing tray for laundering hose, and there are five individual dressing tables with wall mirrors.

A large map of the world, in color, is on one wall of the lounge, and on another are the insignia of the six women's branches of the services. Divans, chairs, desks, a radio, piano, books and magazines complete

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Chinese Officers Learn American Methods

Members of the Technician Corps of the Chinese Army, these five captains (T. S. Kwei, K. I. Wu, C. L. Fan, R. N. Liu and C. T. Chen) at the handrail of a new Diesel built at the Schenectady plant of American Locomotive, have been studying the mechanics of the M-7 tank killers in Alco's Mobile Howitzer Shop and Test Laboratory. They have observed the M-7's in action and have driven them on the proving grounds.

the appointments. The lounge is staffed by railroad personnel, and will be open 24 hours daily.

Other service facilities in Broad Street Station include a U. S. O. lounge for service men and women, a service men's dormitory, with beds for 200, and an Officer's Club, with lounge and dormitory accommodations for 30.

U. S. Railroader Writes of Experiences in India

Former trainmaster on the New York Central, and now attached to the Military Railway Service in the China-Burma-India theater of operation Lt. Col. Karl F. Emmanuel recently wrote his superintendent on the Indianapolis division, from "somewhere in India." (Mention was made of Col. Emmanuel in June 24 *Railway Age*, page 1208). Excerpts from his letter as reported in the "Central Headlight" follow:

"We had a nasty little accident on a bridge of 13 spans, or about one-half mile long. We had 11 cars wedged into the girders; they were loaded with things you drop on the Nips and so we were quite busy. We cleared it in less than 24 hours,

worked on it daytime, moved trains at night, and really did well—kept our railroad open from 8 p.m. (or 2000) to 8 a.m. (0800). In five days the girders and cross members were repaired. Had to fabricate some and we rolled them specially to the bridge. Accident was caused by a heavy truck breaking loose and coming in contact with bridge—just like we have at home sometimes.

"If I told you how much passenger business we do I am fearful, . . . you wouldn't believe me, but I have trains of 25 to 28 'carriages' leave here with Indians hanging all over them—as high as 1500 to 2000 aboard. At night the platforms are covered with Indians, coolies and soldiers of every nation. I have two long, island passenger platforms besides our main one, on which my office is located.

"You talk about reduction in force—my superintendent's office consists of two stenographers, two sergeant clerks, one liaison officer, Jim Truden and myself, and we run the show. Our men are on every job and we have handled as many as 46 freight and 12 passenger trains in one day. Our freight trains average 65 cars and our power is all U. S. A. engines."

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since June 24, and which are of interest to railroads:

Aluminum Paint—Stocks of aluminum powder and paint in distributors' inventories on March 15, 1944, may be sold as provided in Supplementary Order M-1-g beyond June 30, without preference ratings or limitation as to end use. Some isolated cases have been brought to the attention of the division where distributors are under the impression that a preference rating of AA-5 or better constitutes sufficient authority to fill orders regardless of end use. W. P. B. said this is not the case. An additional requirement is contained in paragraph (d) of Aluminum Order M-1-g which states that aluminum pigment or aluminum composition may not be delivered by a person who knows or who has reason to believe it is to be used in a manner not described in paragraph (e) of the order.

Capital Equipment—Procedures whereby operators of transportation systems may obtain items of productive capital equipment costing more than \$500 per unit are explained in Interpretation 2 of PRO P-142, governing material entering into the operation of transportation systems. Items of productive capital equipment are not limited to rolling stock items such as locomotives and cars, but include all items which the particular operator normally charges to his capital account, the interpretation said. Examples are adzers and spike pullers (maintenance of way equipment), and lathes and drill presses (shop equipment).

The interpretation says that order P-142 permits operators to use their Maintenance Repair and Operating Supplies ratings under the order to buy minor items of productive capital equipment not exceeding \$500 per unit (excluding cost of labor), but that operators needing to buy such capital items costing more than \$500 per unit (excluding cost of labor) may not do so under the provisions of P-142. The usual way to get these items, the interpretation says, is by applying on Forms WPB-541 (PD-1A) or WPB-3131, or other applicable forms (such as WPB-3131) for special items of equipment, or under order L-41 if a construction job covered by that order is involved.

Lighting Fixtures—Any relaxation in the use of copper for lighting fixtures will be made only where the quantities involved are small and where the war effort is impeded by restrictions on the use of copper. Copper generally is in

short supply due chiefly to manpower difficulties. Aluminum soon may be permitted for many lighting fixture items which were made from copper or brass in normal times, W. P. B. officials said. The proposed general broadening of permitted uses of aluminum will probably take care of justifiable requirements for aluminum for lighting fixtures. However, there may be difficulty in obtaining certain items such as aluminum strip, circles and aluminum paints.

Lumber—An official interpretation of the Lumber Control Order, L-335, in the form of 86 questions and answers, has been issued by the W. P. B. The first ten questions and answers clarify the relation between L-335 and the orders that have been revoked: M-361 (southern pine), M-364 (restricted hardwoods), L-218 (Douglas fir), L-290 (western lumber), and M-208 (preference ratings for softwood lumber). The relation between L-335 and other lumber orders still in effect—M-122 (Mahogany) for example—is also clarified. Specific examples are given explaining how the transition from former controls to the present over-all control is effected.

Questions and answers 11 through 36 cover definitions. They clarify the differences between L-335 as originally issued in March, and L-335, amended June 23, and effective August 1. Among the questions answered are specific ones on what lumber is, as defined by the order, what products are not subject to the order's provisions, and the operation of concentration and distribution yards under the order.

Manila Rope—Further restrictions have been placed on the use of manila fiber to conserve available supplies of this critical fiber. Amendments, issued June 28, to Conservation Order M-24, provide for a 25 per cent reduction in manila processing quotas.

Nickel-Chrome Wire—Direction 2 to GPO M-18-a prohibits the use of chromium metal to make nickel-chrome resistance wire and the delivery of such wire for use in domestic or commercial electric appliances. Provision is made for appeals, but W. P. B. said that it did not intend to grant authorizations to melt chromium unless the electrical appliance manufacturer requires nickel-chrome resistance wire, for technical reasons, to make his product.

Plumbing Fixtures—Limitations on the use of metals in plumbing fixture fittings and trim apply to the assembly and finishing of such equipment as well as to the manufacture. The previous wording of Schedule V of Order L-42, Plumbing and Heating Simplification, had been

erroneously interpreted to permit the use of metals for plating and finishing by persons other than the manufacturers of the equipment, W. P. B. said. Since this was not the intent of the restrictions, Schedule V has been reworded to clarify the restrictions.

"Small Timbers" Defined—To clarify the coverage of the log-run Southern pine lumber regulation (MPR No. 19A) with respect to timbers, lumber cut to dry more than two inches in thickness, the O. P. A. has ruled, in an official interpretation, that only timbers eight inches wide or less are subject to the regulation. This interpretation reverses an earlier one which held that timbers larger than 8 by 8 in. are any that exceed 32 in. by girth measurement. In effect, the earlier interpretation, brought under the regulation's coverage larger timbers, such as items 3 by 10 in. and 4 by 12 in., which the regulation was not designed to cover. Both of these items come within the 32 in. girth measurement limit set by the earlier interpretation but exceed the 8 in. width limit specified in the regulation.

Solder—Amendment of GPO M-43 effects the following changes: (a) Raises from 21 per cent to 30 per cent the tin content of solder which may not be used except as specifically permitted by the order. (b) Requires the prescribed certification in the purchase of all solders. Formerly, the certification was required only in purchasing solder containing more than 30 per cent tin. (c) Adds radio, radar and electrical appliances to the list of products in which solder containing not more than 35 per cent tin may be used.

Zinc Sulfide Pigments—Amended Order M-358, formerly covering only titanium pigments, has been extended to include zinc sulfide pigments. The amended version makes ineffective all ratings for zinc sulfide pigments below AA-2, with the exception of material required to fill orders for the armed services.

Prices

Bolts, Screws and Rivets—RMPR-147, effective July 12, and covering bolts, nuts, screws and rivets, defines more clearly the transactions to which it applies and clarifies its coverage. It takes the place of the original regulation issued in May, 1942, and two amendments. The changes are concerned for the most part with clarification of several industry practices not specifically included in the original regulation, and with rewording of various provisions for purposes of simplification. A new provision, dealing with producers' minimum charges on small orders, has been added. Other changes deal with orders for small quantities of standard items temporarily not in stock and with the relationship of producers' price schedules to maximum prices.

Electrical Tape—Manufacturers of cable wrapping tape made of buna-S or butyl (synthetic rubber) who in March, 1942, quoted prices on the basis of weight are permitted to recompute their maximum prices on a per-yard basis by Amendment 16 to MPR-220. In some cases ceiling prices were formerly based on the weight of the material. Natural rubber, however, is heavier than the synthetic types, and since the unit of use is area rather than weight, the new method for arriving at maximum prices is fairer to the manufacturer and does not increase the cost to the consumer above that for the same number of yards of tape made of natural rubber during the base period, O. P. A. said.

Iron and Steel—Amendment No. 10 to RPS No. 6, effective July 12, provides an adjustment of the analysis extras on four grades of alloy steel providing a \$2 decrease per gross ton on NE 8600 and 8700 steels, and an increase of \$3 per gross ton on AISI 4100 and 3100 steels. The amendment also removes from the schedule's coverage the pricing of forged axles and car wheels. These commodities will be covered by MPR No. 136 (Machines and Parts and Machinery Services).

Warm-Air Furnaces—In order to carry out the original intent of the action taken June 24, 1944, permitting an increase in manufacturers' maximum prices of some types of warm-air furnaces and all warm-air furnace repair parts Correction to Amendment No. 42 to Order A-1 under MPR No. 188 provides that published list prices of August 3, 1943, will be used as base prices, rather than the list prices of August 4, 1943, as previously announced.

GENERAL NEWS

C. A. B. Unrelenting on Surface Carriers Upholds rigid restriction on their entry into air transportation

Arguments of "surface" carriers urging that the Civil Aeronautics Board refrain from the adoption of a sweeping rule that would deny them the right to engage in air transportation simply because they are surface carriers, and relevant recommendations in the examiners' report in that board's No. 857 proceedings, dealing with local feeder and pick-up air service, have led the board, in its opinion accompanying an order terminating that investigation, to point out that it has not altered its general policy that surface carriers will be permitted to participate in local or feeder air transportation only when such service is clearly auxiliary, supplementary, and incidental to other transport operations.

No specific rule was laid down as to the participation of surface carriers, however, since the board held that the applicability of section 408 of the statute—which the board has construed in "extremely restrictive" fashion—and a determination as to whether an individual applicant meets its provisions will have to be decided on the basis of the facts and circumstances of each case.

Board-Made Law—The opinion went on to point out that "surface carriers are not precluded from participation in air transportation. The second proviso of section 408(b) is not a prohibition, but a restriction upon such participation. The inability in the past of an applicant to meet the requirements obviously does not mean that those requirements cannot or will not be met in some future case."

Moreover, the board added, in cases thus far decided by it in which a surface carrier was involved, "that carrier or its subsidiary was seeking to acquire control of an air carrier. No case has been decided in which a surface carrier itself applied for a certificate of convenience and necessity under section 401 of the act."

All members of the board concurred in the opinion. The examiners' report in which the "rigid" adherence of the board to its present interpretation of the "restrictive" provisions of the act as applied to surface carriers was strongly urged was outlined in *Railway Age* of February 12, page 363.

Service for Small Cities—The opinion dealt at some length with two principal aspects of the investigation, namely, "the propriety of extending air transportation to communities and localities throughout the continental United States to which such

transportation may not appear warranted under usual economic conditions or under existing standards of operation," and the co-ordination of such extended air transportation as may be authorized with air transportation already operating.

The board's general conclusions were (1) that "the provision of a short-haul and local service with aircraft will be, in a very great measure, an experimental operation, and constitutes a problem with respect to which we have little or no information of a factual nature," and (2) that, in order to safeguard the "financial liability of the government," under these conditions, such operations should be limited to temporary periods, not more than three years, and confined to situations "which show a justifiable expectation of success at a reasonable cost to the government."

The board accepted the examiners' conclusions that "the traffic potential at small cities is not encouraging" for air transportation, and that "the cultivation of this potential at a reasonable cost to the government and the traveling public will be possible only by taking advantage of every possible economy." In attempting to develop this "potential," the board added, "local air carriers will be competing with the most highly developed rail and highway transportation systems in the world."

The opinion indicated that the board would consider applications for helicopter operation as submitted to it, but it went on to say that "we cannot be expected to grant an application for service which cannot be performed except by the use of a vehicle which is not obtainable for a number of years."

Service Company Employees Get Rail Wage Increases

The National War Labor Board has instructed Regional Boards to allow employees of so-called service companies the wage increases which railroad unions received January 17. Such companies perform various services for railroads and on railroad property which are usually done by employees of the railroads, and they have employees engaged in the railroad industry who are members of railroad unions, the W. L. B. held. Since such companies are not classed by the Interstate Commerce Commission as railroads, their wage adjustments are not covered by Railway Labor-Act processes, but must be approved by the W. L. B.

British Railway Booklet

Copies of the brochure—"British Railways in Peace and War"—announcement of the publication of which appeared in the July 8 issue of *Railway Age*, page 97, may be obtained in this country, by writing to Associated British & Irish Railways, Inc., 9 Rockefeller Plaza, New York 20, N. Y.

Business Is Warned of Transport Crisis

Socialized railroads near if
public policy doesn't
get realistic

Declaring that outmoded principles of regulation and the promotion of one form of transport as against another will lead to financial default of essential instrumentalities and to ultimate government ownership in the post-war period, the Transportation Association of America has dispatched a letter to all Chambers of Commerce in the United States and to 25,000 farm, business and civic leaders, advocating a complete reappraisal of national transportation policy by Congress and the adoption of a post-war pattern for regulation of the common-carrier industry which will give prime consideration to the needs of the shipper and consumer and afford an opportunity for private capital to secure a fair return when invested in the industry as a whole.

The letter is sent in answer to the opposition of the American Trucking Association, Inc., and the Air Transport Association of America to Referendum No. 83 of the United States Chamber of Commerce.

The Transportation Association of America believes that the declarations set forth in this Referendum are in the public interest as a first step looking to the preservation of private ownership for this industry and to the assurance of the most convenient and efficient transportation services at the lowest possible cost to the public.

Criticize Truck Organization—Referring to the position of the American Trucking Association, Inc., Donald D. Conn, Executive Vice-President of the Transportation Association of America, declared:

"This self-interest group is seeking to maintain an uneconomic structure among common-carrier trucking companies by asking the public to pay a constantly increased level of rates. In May of this year it requested the Interstate Commerce Commission to increase rail rates for the purpose of diverting tonnage to truck lines. It offers no constructive solution to the transportation problem; it is concerned only with promoting its own interests."

"Air Transport Association, cushioned by the promotional activities of the Civil Aeronautics Board, is engaged in building a great dynasty in the air for the exclusive benefit of investors in a few air lines. At present five such lines handle 90 per cent of the traffic."

C. A. B. Is Not Impartial—"The Civil Aeronautics Board has placed its own interpretation upon the Civil Aeronautics Act. It has ruled that Congress intended to pro-

hibit any surface forms of transport from engaging in air services, or owning any part of existing air lines. This Board has no responsibility whatever to the transportation problem as a whole. So far as domestic common carriers are concerned, it is interested only in the promotion of air lines. It permits a duplication of facilities, and encourages wastes without parallel in the history of the industry. It proposes that the benefits derived from the vast outlays of government and municipal expenditures for the building of airports and the furnishing of essential air supervision shall be denied to surface carriers who seek an opportunity to coordinate all types of services.

"As soon as possible Congress should explore this whole problem in the light of experiences of the past 25 years. It should resolve a philosophy of organization and a structure within all parts of this industry from the standpoint of what is best for the traveler, the shipper and the consumer—not for the purpose of promoting the self-interests of those who own any particular type of transportation. Transportation facilities are 'tools.' Any contracting agency should be permitted to offer a complete transportation service—to use the particular 'tool' which will most efficiently do the job under any given set of conditions.

The Civil Aeronautics Board should be abolished. Regulation of all domestic common carriers should be centralized in a reorganized Interstate Commerce Commission, dedicated to the primary responsibility of administering regulation so as to assure the patron of the most dependable, efficient service, *regardless of the facility*, at the lowest cost consistent with preserving a sound credit position for the industry as a whole."

Cleveland Traffic Club Elects Officers

The following officers have been elected by the Traffic Club of Cleveland for the ensuing year: President, M. K. DeWitt, traffic manager of the Lamson & Sessions Co.; first vice-president, E. G. Cook, general agent of the Southern Pacific; second vice-president, Henry E. Boyer, traffic manager of the White Motor Company; treasurer, Frank J. Knecht, traffic service agent of the Illinois Central; and secretary, Thomas F. Cahill, vice-president of the Cleveland & Buffalo Transit Co.

Further Changes in Commission Accounting Regulations

Division 1 of the Interstate Commerce Commission has ordered certain modifications and amendments to the commission's "Uniform System of Accounts for Steam Railroads" to become effective September 1, and has further postponed the effective date of other orders prescribing certain accounts. Effective date of order of July 13, 1937, prescribing operating revenue account 117, Protective Service—Perishable Freight, has been further postponed one year to January 1, 1946. The effective date for the comparable account 108½, affecting electric railways, likewise has been postponed to the same date.

The mandatory requirement for accounting for depreciation of road property which was prescribed in orders of June

Suggests Federal Funds for Chicago Terminal

The construction of a new passenger terminal in Chicago with possible financing by the federal government was suggested as a postwar measure by Mayor Kelly at a meeting with representatives of the railways, called by the Mayor on July 13. The new terminal would replace the Central, Dearborn, Grand Central and LaSalle Street stations. Following informal discussion among those present, the majority of whom were engineers of the 14 railroads using these stations, a committee of railroad engineers was appointed to study the feasibility of terminal construction as a postwar measure. The meeting, called by Mayor Kelly, follows a letter sent by Governor Green to the Illinois Post-war Planning Commission on July 2, in which he suggested that the development of railroad and other transportation facilities in Chicago be considered by the Commission.

These proposals are discussed in the leading editorial in this issue.

8, 1942, has been further postponed as to Class II and Class III steam roads until January 1, 1946, leaving compliance with these requirements optional until that time for roads in those classes.

An order effective September 1, applying to all steam roads, makes various changes in the prescribed uniform system of accounts. Account 330 is designated Retirements—Equipment, instead of Extraordinary Retirements—Equipment. The designation of account 785 is changed to Earned Surplus—Appropriated, and the designation of account 786 is changed to Earned Surplus—Unappropriated.

The same order includes minor amendments to the instructions applying to account 270, covering dismantling retired road property. A new provision applying to account 267, Retirements—Road, reads as follows:

When road property previously subject to amortization accounting under section 124, "Amortization deductions," of the Internal Revenue code is retired, the difference between the service value (ledger value less value of salvage and insurance recovered) thereof, and the balance in account 775½, Accrued amortization of Defense Projects—Road, with respect to the specific facility retired, after appropriate adjustment for any depreciation accrued thereon, shall be included in this account.

A similar provision is applied to account 330 (the accrued amortization account there affected being No. 776½).

Hearing on T. P. & W. Injunction Opened at Springfield

A hearing on the petition of George P. McNear, president of the Toledo, Peoria & Western for an injunction to halt construction work on that railroad by the federal manager, was opened in the federal district court at Springfield, Ill., before Judge J. Leroy Adair on July 17. As reported in the *Railway Age* of July 15, the suit was filed in the circuit court of McDonough county at Macomb, Ill., but on July 10, the Department of Justice filed a

petition in the federal court at Springfield for an injunction to restrain the owners from proceeding with their case before the state court. Judge Adair granted a temporary stay and held a hearing on July 12, at which he took jurisdiction over the case on the grounds that federal matters were involved and denied a motion of the owners to remand the case to the state court. He also insisted that construction work be halted until the owner's petition was heard.

At the hearing on July 17, George Voelker, federal manager was the first witness. He was followed by T. H. McKibben, division engineer of the Atchison, Topeka & Santa Fe at Chillicothe, Ill., who stated that the section of track in question has been kept in good repair by the government management and that there is no serious need for relaying the rails at this time.

W. F. A. Permit Required to Ship Western Oranges

Effective July 23, Interstate Commerce Commission Service Order No. 218 prohibits railroads from supplying cars for loading, or moving cars loaded with oranges in carload or 1.c.l. quantities from any point in California or Arizona to interstate or Canadian points, except upon presentation by the shipper of a War Food Administration permit issued by that agency's director of distribution. The order was issued in conformity with authority given the Secretary of Agriculture to regulate the handling and shipment of oranges grown in these states and with Marketing Order No. 66 issued thereunder.

Santa Fe to Rehabilitate Juvenile Delinquents

A plan to employ wards of the juvenile court and thereby aid in the rehabilitation of delinquents, is being undertaken by the Atchison, Topeka & Santa Fe in collaboration with Judge Samuel R. Blake of the Superior Court of Los Angeles County; Col. Vicente Peralta, counsul general of Mexico at Los Angeles; and Daniel C. Marcus, consulting attorney for the Mexican consulate. The experiment will be started with the employment of 50 Mexican boys as track laborers in an extra gang headquartered at Daggett, Calif. They will receive standard pay and all benefits of labor agreements, but one-half of each boy's wages will be held by the juvenile probation officer of Los Angeles County, as trustee, until such time as the juvenile court proceeding is terminated. The accumulated sum will then be paid the boy or his parents, subject to the order of the court. The boys will work eight hours per day, six days a week. On proof of adaptability and performance, they will have the opportunity of advancing in Santa Fe service.

According to Judge Blake, who is responsible for the inauguration of the program, "This is the first instance where a major corporation has shown a willingness to cooperate in the correction of juvenile delinquency, which is a problem of increasing civic and economic significance. It is hoped that the Santa Fe's lead in this most needed rehabilitation program will be followed by other industries."

According to Consul General Peralta, not

only Mexican descendants, but some nationals of the Republic of Mexico will be affected. He labeled the program an active furtherance of good neighbor policy. "The plan is one of rehabilitation of juvenile delinquents through constructive effort," Marcus said.

Freight Car Loading

Loadings of revenue freight for the week ended July 15 totaled 904,804 cars, the Association of American Railroads announced on July 20. This was an increase of 159,663 cars, or 21.4 per cent above the preceding week (which included the July 4 holiday), an increase of 27,469 cars, or 3.1 per cent over the corresponding week last year, and an increase of 47,658 cars, or 5.6 per cent, above the comparable 1942 week.

Loading of revenue freight for the week ended July 8 totaled 745,141 cars, and the summary for that week as compiled by the Car Service Division A. A. R., follows:

Revenue Freight Car Loading

	For the Week Ended	Saturday, July 8	
District	1944	1943	1942
Eastern	132,228	151,558	155,424
Allegheny	167,575	175,040	184,348
Pocahontas	39,608	56,204	54,219
Southern	100,811	109,143	115,103
Northwestern	112,415	128,293	147,176
Central Western	121,682	118,709	129,190
Southwestern	70,822	69,683	69,755
Total Western Districts	304,919	316,685	346,121
Total All Roads	745,141	808,630	855,158
Commodities			
Grain and grain products	57,120	54,809	53,509
Live stock	11,322	11,150	10,348
Coal	124,970	164,803	158,827
Coke	13,682	12,956	14,338
Forest products	33,258	37,226	51,034
Ore	75,146	89,309	94,037
Merchandise i.e.l.	90,991	89,574	88,705
Miscellaneous	338,652	348,803	384,360
July 8	745,141	808,630	855,158
July 1	897,800	852,082	753,740
June 24	881,267	760,930	853,418
June 17	879,161	868,286	844,913
June 10	874,193	854,486	832,635
Cumulative Total,			
28 Weeks	22,694,335	21,761,180	22,672,299

In Canada—Carloadings for the week ended July 8 totaled 71,405 as compared with 63,531 for the previous week (which was affected by the holiday, July 1), and 66,429 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
July 8, 1944	71,405	36,831
July 1, 1944	63,531	36,880
June 24, 1944	72,677	38,835
July 10, 1943	66,425	39,332
Cumulative Totals for Canada		
July 8, 1944	1,862,465	1,058,845
July 10, 1943	1,715,482	1,064,376
July 11, 1942	1,717,116	887,486

Two-Thirds of Annuities Based on 30 Years' Service

More than two-thirds of the annuities finally certified through June, 1943, were based on 30 years of service, according to the July issue of the Monthly Review of the Railroad Retirement Board. The average number of credited years of service of all annuitants at that time was 26.9, the Review continued. The average monthly compensation on which the annuities were based

was \$155.06. A close relationship between length of service and monthly compensation is shown. Annuities based on short periods of service were also based generally on low average earnings; those based on less than 5 years were on monthly compensation, which averaged only \$61.26. Conversely, those based on a full 30 years of service were associated with an average monthly compensation of \$176.53.

The 1,816 applications for employee annuities received in May were the largest number received in any month since July, 1943. The average for the first 10 months of the fiscal year was 1,670. Certifications for the month, while exceeding those in April, totaled only 1,406. Terminations were also low, numbering 826. At the end of the month, 138,658 employee annuitants were on the rolls, with monthly payments averaging \$66.53. The pension rolls were reduced by 261 during the month, to 21,106. Only 101 survivor and death-benefit annuities were certified in May. The 1,467 lump-sum death benefits certified, however, represented the largest number for any month since May, 1943. Benefit payments certified to the Treasury during the month totaled \$11,500,000.

Fewer claims for unemployment insurance benefits were received in May than in any other month since the inception of the program. Likewise, the number of benefit payments was the smallest ever made. The figures were 1,470 and 1,100, respectively. The \$29,000 paid to unemployed workers was lower than in any other month except one.

June Operating Revenues Exceed '43 Month by 5.6 Per Cent

From preliminary reports of Class I railroads representing 81 per cent of total operating revenues, the Association of American Railroads has estimated that operating revenues in June totaled \$639,311,618, compared with \$605,268,400 in June, 1943, an increase of 5.6 per cent. Estimated June freight revenues were \$467,931,069, compared with \$444,671,079, an increase of 5.2 per cent. Estimated passenger revenues were \$126,867,650, as compared with \$118,141,248, an increase of 7.4 per cent.

Hold Up Light Truck Production

The Office of Defense Transportation has notified its 142 district offices not to accept new applications for light motor trucks, following a denial by the War Production Board of its request for resumption of light truck production beginning with the first quarter of 1945.

In view of the extreme tightness of flat rolled steel products and the existing manpower shortages that are affecting the medium and heavy truck program as well as other highly urgent military programs, the W. P. B. Requirements Committee did not feel that it would be feasible to authorize the production of light trucks unless facilities and manpower were made available by cut-backs in these other urgent programs, O. D. T. was advised.

A total of 41,000 light trucks for the first quarter of next year was, however, authorized on a "suspended AA-3" basis. This, it was emphasized, does not consti-

tute an authorization to produce until specifically validated by W. P. B. at some later date. It permits planning for production, but not actual production.

At the present time there are only 700 light trucks remaining in the national pool, according to the O. D. T., and of these only 300 are available for essential civilian uses, the remainder being "earmarked" for the War and Navy departments, Maritime Commission, and other "government-exempt" agencies. Ordinary peacetime production of trucks in this class averages 300,000 a year.

Name Ship for Late U. P. Head

The United States Maritime Commission has announced that a "Liberty" type cargo ship under construction at the Todd-Houston shipyard at Houston, Tex., has been given the name *Robert S. Lovett*, in honor of a former executive of the Union Pacific system. Born at San Jacinto, Tex., near Houston, in 1860, he entered the service of the Houston East & West Texas (now part of the Southern Pacific system) in 1884 as local attorney. Later he became general counsel of all S. P. lines in Texas, president of the Houston & Texas Central, and, in 1904, vice-president and general counsel of the Union Pacific, Southern Pacific and affiliated roads.

From 1909 to 1913, when the Supreme Court ordered a separation of control of the U. P. and S. P., Judge Lovett was chairman of the executive committee of both systems; after 1913 he continued in that position on the Union Pacific, with some time out for government service during World War I, until 1924. Meanwhile, in 1920, after a short term as president of the U. P., he was named chairman of the board of that road, a position he held until his death in 1932.

British Railway Performance Reviewed in Commons

Some indication of the gigantic task being performed by British railways was indicated in a speech delivered before the House of Commons on May 5, and reported in the *Railway Gazette* (London).

On that occasion, P. J. Noel-Baker, Parliamentary Secretary to the Minister, told the assemblage that 106 million more passengers were carried last year than in 1942, and that, exclusive of trips by commuters, the total handled represented an increase of 20 per cent over pre-war; average haul had increased more than half and total passenger-miles had risen 60 per cent above pre-war. He remarked that 80 per cent of those traveling over 200 miles were service men and their families.

Regarding freight traffic, it was disclosed that general merchandise net ton-miles had increased 86 per cent over pre-war; heavy merchandise and minerals, 68 per cent; coal traffic, 13 per cent. Average length of haul had risen also.

Presumably because of the difficulty of defining an "essential" trip, no one has yet suggested any workable plan for rationing travel, Mr. Noel-Baker observed. But, he pointed out, that with passenger train-mileage cut 39 per cent, and with a rise of 120 per cent in train-loading compared with pre-war, the discomfort encountered had acted

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 131 reports (Form IBS) representing 135 steam railways
(Switching and Terminal Companies Not Included)

All Class I Railways

Income Items	For the month of April		For the four months of	
	1944	1943	1944	1943
1. Net railway operating income.....	\$87,673,803	\$128,669,507	\$350,283,955	\$473,735,012
2. Other income.....	13,943,211	13,038,619	55,848,840	50,750,433
3. Total income.....	101,617,014	141,708,126	406,132,795	524,485,445
4. Miscellaneous deductions from income.....	4,323,766	2,693,787	12,323,528	9,529,478
5. Income available for fixed charges.....	97,293,248	139,014,339	393,809,267	514,955,967
6. Fixed charges:				
6-01. Rent for leased roads and equipment.....	12,428,532	14,074,794	49,968,568	59,264,269
6-02. Interest deductions ¹	34,290,374	35,832,849	137,564,84	142,14
6-03. Other deductions.....	154,274	120,130	543,225	499,625
6-04. Total fixed charges.....	46,873,180	50,027,773	188,075,777	204,904,386
7. Income after fixed charges.....	50,420,068	88,986,566	205,733,490	310,051,581
8. Contingent charges.....	2,386,791	2,713,449	9,479,236	9,511,818
9. Net income.....	48,033,277	86,273,117	196,254,254	300,539,763
10. Depreciation (Way and structures and Equipment).....	26,602,876	26,514,153	105,831,704	105,675,041
11. Amortization of defense projects.....	15,165,759	10,318,633	58,335,960	40,665,619
12. Federal income taxes.....	101,427,220	120,882,396	411,209,543	420,986,138
13. Dividend appropriations:				
13-01. On common stock.....	275,982	383,082	25,793,247	23,852,470
13-02. On preferred stock.....	858,123	852,990	6,636,157	6,378,953
Ratio of income to fixed charges (Item 5 + 6-04).....	2.08	2.78	2.09	2.51

Selected Assets and Liability Items

20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707).....	All Class I Railways		
	Balance at end of April	1944	1943
\$587,179,608	\$555,309,314		
21. Cash.....	1,068,853,142	1,029,368,105	
22. Temporary cash investments.....	1,764,056,778	1,154,889,868	
23. Special deposits.....	193,359,236	149,293,031	
24. Loans and bills receivable.....	218,843	302,228	
25. Traffic and car-service balances—Dr.....	47,353,377	39,564,968	
26. Net balance receivable from agents and conductors.....	143,222,347	159,716,942	
27. Miscellaneous accounts receivable.....	667,992,855	535,435,084	
28. Materials and supplies.....	575,296,888	519,287,375	
29. Interest and dividends receivable.....	25,444,201	20,620,951	
30. Rents receivable.....	1,768,501	1,185,568	
31. Other current assets.....	59,675,176	23,592,908	
32. Total current assets (items 21 to 31).....	4,547,241,344	3,633,257,029	
40. Funded debt maturing within 6 months ²	102,805,725	164,721,124	
41. Loans and bills payable ³	13,687,426	16,379,551	
42. Traffic and car-service balances—Cr.....	211,732,795	129,505,075	
43. Audited accounts and wages payable.....	465,496,836	379,677,420	
44. Miscellaneous accounts payable.....	115,247,855	82,525,600	
45. Interest matured unpaid.....	50,217,128	56,728,812	
46. Dividends matured unpaid.....	3,195,301	2,727,500	
47. Unmatured interest accrued.....	62,607,382	67,660,389	
48. Unmatured dividends declared.....	8,323,343	8,213,031	
49. Unmatured rents accrued.....	27,063,157	27,798,555	
50. Accrued tax liability.....	1,850,290,723	1,272,286,026	
51. Other current liabilities.....	91,606,115	69,538,555	
52. Total current liabilities (items 41 to 51).....	2,899,468,066	2,113,040,514	
53. Analysis of accrued tax liability:			
53-01. U. S. Government taxes.....	1,715,393,940	1,145,673,993	
53-02. Other than U. S. Government taxes.....	134,896,783	126,612,033	

¹ Represents accruals, including the amount in default.

² Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

³ Includes obligations which mature not more than 1 year after date of issue.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.
Subject to revision.

as a deterrent for making needless trips.

By zoning commodities, such as beer, crackers, chocolate, etc., British railways have effected a saving of 276 million ton-miles a year in freight traffic. Fish train-mileage has been reduced 35 per cent, he said.

Mentioning that 85 per cent of the work done in railway shops has been that of repairs rather than building of new equipment, the speaker remarked that government control has permitted economies in clerical work, by the adoption of "flat rates" for government traffic, simplified procedure for handling claims and demurrage, and the entry of all operating expenses and revenues in a common pool.

Better use has been made of transport

than before the war, claimed the Secretary, attributing this to the close co-operation of railways. He cited pooling of passenger and freight, tarpaulins and ropes, exchange of locomotives and crews, and he told of the daily telephone conference of traffic managers to plan mutual assistance in the light of current traffic.

When a Laborite M. P. expressed disappointment that there had been nothing said about government post-war transport policy, Mr. Noel-Baker suggested that "long and careful technical study of each individual form of transport was required" before the Ministry could begin even to consider a general plan. The speaker suggested that for the present the Ministry was completely preoccupied with the war, but that, following

it, there would be a "considerable period" before government control of railways would end. Railway Gazette explained that "Article 33 of the Railway Control Agreement provides merely that control will be continued for a minimum period of one year after the cessation of hostilities."

To Probe Greyhound's Relation to Other Bus Lines

The Interstate Commerce Commission, on its own motion, has instituted an investigation into the relation existing between the control or management of the Greyhound Corporation and carriers controlled by it, on the one hand, and the Southern Limited, Inc., and Southeastern Stages, Inc., respectively, on the other, as carriers subject to part II of the Interstate Commerce Act. Docketed as proceedings Nos. MC-F-2583 and 2584, time and place of hearing in the cases will be determined later.

In initiating the investigations, the commission has indicated that it appears that control or management of the Southern Limited and of Southeastern Stages "in a common interest with the Greyhound Corporation of a carrier or carriers controlled by it, may have been effectuated and may be continuing in violation of" section 5(4) of the act.

Boatner Not Allowed to Join Norfolk Southern Board

The application of Victor V. Boatner, a director of the Chicago & Eastern Illinois and executive representative of the Norfolk Southern, with offices at Chicago, for Interstate Commerce Commission authority also to hold the position of director of the Norfolk Southern has been denied by the commission, with Commissioners Mahaffie, Aitchison and Miller dissenting. Commissioner Rogers did not take part in the disposition of the case.

The application was filed in conformity with section 20a(12) of the Interstate Commerce Act, which makes it unlawful for any person to be an officer or director of more than one carrier subject thereto, unless authorized by a commission order upon due showing that "neither public nor private interests will be adversely affected thereby." The majority held that it was unable so to find in this case.

"Because of the importance of maintaining complete independence and impartiality between major railroad companies or systems and the possibility of competition and conflict of interests between such railroads or systems, a person should not be permitted to serve as officer or director of more than one such railroad or system, except in special circumstances," the majority stated. Such special circumstances have not been shown to exist in this case, it added. Its decision under these conditions was based on precedents established in the *Rand* and *Astor* cases, the report explained.

The Two Roads Don't Compete—The dissenting opinion pointed out that the majority "does not deny that the applicant is qualified, and it further admits that there is no evidence of any competition or conflict between the Chicago & Eastern Illinois and the Norfolk Southern." If Congress

had intended that no one may be allowed to serve two carriers, "except in special circumstances," the dissenters held, "it could readily have said so. Instead, it imposed only a showing as to harm to public and private interests as the test. That test has been met."

The results of a contest between interests supporting Mr. Boatner and the management of the C. & E. I., in which the latter allegedly was influenced by the Reconstruction Finance Corporation, for control of that road, after a Senate committee investigation led to exoneration of the management, were noted in *Railway Age* of May 20, page 1004.

May Earnings in Canada

The two principal Canadian railways reported May earnings and expenses as follows:

Canadian National		
May	1944	Increase
Gross	\$36,369,000	\$704,000†
Expenses	29,231,000	911,000
Operating Net* ..	\$7,138,000	\$1,615,000†
5 Months		
Gross	\$176,190,000	\$4,966,000
Expenses	143,642,000	7,985,000
Operating Net* ..	\$32,548,000	\$3,019,000†

† Decrease

Canadian Pacific		
May		
Gross	\$27,316,649	\$3,111,588
Expenses	22,846,290	2,954,642
Net*	\$4,470,359	\$156,946
5 Months		
Gross	\$127,918,069	\$16,384,755
Expenses	109,776,111	15,024,522
Net*	\$18,141,958	\$1,360,233

* Net as shown in this tabulation for the C. N. R. is equivalent to "Net Operating Revenue" in U. S. accounting terminology, while the net shown for the C. P. R. corresponds to "Net Railway Operating Income" in U. S. terms.

Ask Hearing on Western Grain Rate Parity Question

Replies to the Interstate Commerce Commission's order to "show cause" why the so-called rate parity applying to wheat and coarse grains in western territory, as required by a commission order in its No. 17000 proceedings, part 7, should not be permanently set aside, have been filed by the respondent railroads and by several shippers' organizations interested in the traffic involved.

As reported in *Railway Age* of April 22, page 795, the parity provisions have been under suspension, as applied to certain feed grains, since June 1, 1941, "to meet an alleged emergency said to have been brought about by competition with itinerant or merchant truckers," but the commission recently declined to extend the suspension further. Acknowledging that the normal "parity" rates are, in most instances, too high to move the affected whole grains against truck competition, the majority of the commission took the position that the solution of the difficulty should be found in a permanent adjustment of the applicable rates, rather than in repeated extensions of the suspension of the parity requirement.

In their reply to the "show cause" order, the western railroads pointed out that the order "suggests that the propriety of such findings [requiring parity], at the

present time and for future application, may be in doubt. But whatever doubt exists patently is not prompted by the record as it was and is today, and any modification of the orders and findings herein abolishing the requirement of parity in the rates on coarse grains and wheat should be supported by evidence supplemental to the evidence in the record as it now stands. The commission ought not modify the parity provisions of the findings and orders herein without a hearing."

The carriers' reply went on to say that, if it had not been for the parity requirement, adjustments of rates on wheat, flour and other products of wheat would not have involved "such substantial reductions," thus putting in the suggestion that a downward permanent departure from parity with respect to one type of grain might have to be accompanied by an upward revision of the "normal" rate applied to other grains and grain products.

Canadian Brotherhood Chief Named to Radio Board

Howard B. Chase, president of the Canadian Brotherhood of Locomotive Engineers, has been appointed chairman of the Board of Governors of the Canadian Broadcasting Corporation, to succeed Rene Morin, Montreal financier.

Mr. Chase now heads the Board which decides most of the policy of the government-owned radio enterprise in Canada and which is largely instrumental in framing and enforcing regulations on the privately-owned stations. At the outbreak of war he was appointed to the Defense Purchasing Board.

During an interview in Montreal after the C. B. C. appointment, Mr. Chase told of starting with the Northern Pacific, in North Dakota at the age of 18 as an engine wiper, and working up to fireman, then engineer. He admitted quietly that an engineer's life still looked good to him, "maybe running out of Vancouver, which is a mighty nice place to live." He still holds his seniority as a Canadian National engineer.

Inter-Operator Truck Leases Not Under O. P. A. Ceilings

Charges for the leasing of trucks between over-the-road motor carriers in fulfillment of Office of Defense Transportation requirements have been exempted for an indefinite period from control by the Office of Price Administration.

These charges, which have been temporarily exempted from price control since April 14, will remain under a measure of control through a plan drawn up and administered by the O. D. T., it was explained. Under this plan, the lessor and lessee may agree between themselves what rate shall be paid for use of the trucks. There is no ceiling on that rate. If the parties fail to agree on a rate, a schedule of specified rates is prescribed and must be used, subject to appeal to O. D. T. if the specified rates are deemed unsatisfactory.

This plan, which has been in effect for the last three months, is said to be working successfully and so far has operated without the use of the appeal procedure. The

O. P. A. explained that, on an examination of the schedule of rates prescribed by O. D. T., it does not appear that it will produce any inflationary effect. Moreover, the rates mutually agreed upon between lessor and lessee are subject to the practical limitation of the amount of revenue that the lessee can receive on shipments.

This exemption applies only to the compensation charged between truck operators for the rental of equipment under O. D. T. orders. It does not extend to any other type of truck rental, or to the rates that the operator leasing the truck may charge the shipper of commodities being transported in the truck.

Wheat Movement Under Control

The movement of wheat from the Southwest passed its peak this week with the railroads continuing to supply as many cars as could be unloaded at destination points. However, on July 19, there still remained on the ground about 4,750,000 bu. at railroad stations and about 11,000,000 on farms while country elevators and local storage space still contained large quantities of grain awaiting shipment to market. Up to July 19, 104,000 cars, or 200,000,000 bu. of a total anticipated rail movement of 456,000,000 bu. of winter wheat have been moved by rail, and it is estimated that the balance will continue to move by rail until June 30, 1945. The present movement will continue brisk until August 15, and all wheat on the ground will be shipped during the next week.

The bottleneck in the movement of the wheat crop this year, the largest on record, has been the lack of labor at unloading points. The car supply was protected by the permit system which prohibited the loading of cars unless they could be unloaded at destination, but abuses, such as shipping as cash grain and later reconsigning to storage, created bad situations at several points and delayed cars. As a result, shipments to Enid, Okla., and Ft. Worth, Tex., were embargoed on July 1 and 4. The Kansas City, Mo., and Louisville, Ky., markets became glutted and were embargoed on July 10 and 11, and to protect the Chicago market it also was placed under embargo. By July 17, the Kansas City and Chicago facilities had been relieved and the embargoes were modified. On July 14, 70 elevators were still blocked in the Southwest.

When the movement of wheat from the Southwest was placed under control, the railroads were able to transfer some of their surplus cars to Nebraska in preparation for the movement of its grain crop, the harvesting of which will start next week. At the same time they are preparing for the movement of the Northwest crop which will start on August 1.

Truck Tire Inspection to Be More Thorough

Because the truck tire situation "is extremely critical and is becoming more so," the Office of Price Administration has amended its regulations concerning the periodic inspection of commercial vehicle tires, making only certain inspection stations, to be designated by O. P. A. district

SPEED ALONE IS NOT ENOUGH—
Tonnage, too,
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SPEED has been the keystone of America's wartime transportation job . . . but speed alone is not enough.

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directors, eligible to make such inspections, as distinguished from the larger group of inspection stations which hereafter will be authorized to make only the less rigid passenger car tire inspections. The amendment is effective July 25.

It was explained that inspection stations qualified to do the thorough, specialized job required to be sure that no truck tire goes out of service before it has given its last mile of wear not only must have qualified workmen experienced in servicing and inspecting large size tires, but also the necessary tools and equipment, and space sufficient to store tires for a 30-day period. The latter requirement results from a provision that, where there is no central truck tire inspection station, the local inspection station must tag and hold for 30 days truck tires less than 12 in. in diameter and all truck tires certified for replacement, so they may be examined by an O. P. A. examiner.

Another modification in procedure requires that all truck tires that are unfit for further use be identified by notching the bead of the tire, so consumers will be protected against the sale of such rejected tires. No change is made in the requirements for periodic tire inspection.

Equipment on Order

Class I railroads on July 1 had 41,236 new freight cars on order, according to the Association of American Railroads. On the same date last year they had 31,744 on order. This year's July 1 total included 13,506 hopper, 4,448 gondolas, 672 flat, 17,325 plain box cars, 2,618 automobile box cars, 2,167 refrigerator, and 500 stock freight cars.

The Class I roads also had 581 locomotives on order on July 1, compared with 1,024 on the same day in 1943. The former figure included 179 steam, two electric and 400 Diesel-electric locomotives, compared with 506 steam, five electric and 513 Diesel-electric locomotives one year ago.

Class I roads put 15,431 new freight cars in service in the first six months this year compared with 9,415 in the same period last year. Those installed in this year's first six months included 8,615 hopper, 1,060 gondola, 843 flat, 920 automobile box, 3,797 plain box, and 195 refrigerator freight cars and one other car.

They also put 494 locomotives in service in the first six months of 1944, of which 190 were steam, one electric and 303 Diesel-electric. Locomotives installed in the first six months of 1943 totaled 293, of which 200 were steam, 13 electric and 80 Diesel-electric.

Shippers Board 1943 Estimates Only 0.01 Per Cent High

In disclosing the results of a comparison of the forecasts of the Regional Shippers Advisory Boards with actual carloadings for the year 1943, the Car Service Division of the Association of American Railroads has pointed out that the aggregate result was an over-estimate of 0.01 per cent. The total percentage of accuracy in all 13 boards was "noteworthy," the statement added.

Of 27 commodity groupings, variations of accuracy were greater than 10 per cent in only 6 classes, it was explained, and estimates on 11 of the 27 commodities showed variations in accuracy of less than 5 per cent. Over a 13-year period, on actual carloadings of 284,836,744, the average result was a 2.3 per cent over-estimate. The average results for 1943, tabulated below, were the best, from the standpoint of accuracy, over the 13-year interval.

COMPARISON, NATIONAL FORECAST WITH ACTUAL LOADINGS—YEAR 1943

Board	Carloadings—1943		Over	Under	Per cent of Accuracy
	Estimated	Actual			
Allegheny . . .	4,292,398	4,220,990	1.7	.1	
Atlantic States . . .	2,479,584	2,433,619	1.9	.1	
Central Western . . .	971,267	1,067,617	.1	.9	
Great Lakes . . .	1,831,836	1,709,082	6.7	.1	
Mid-West . . .	3,843,790	3,680,481	4.2	.1	
New England . . .	380,272	386,695	.1	.7	
Northwest . . .	2,479,104	2,450,465	1.2	.1	
Ohio Valley . . .	3,876,801	3,869,636	.2	.1	
Pacific Coast . . .	1,093,410	1,068,957	2.2	.1	
Pacific Northwest . . .	938,849	993,349	.1	5.8	
Southeast . . .	3,280,332	3,288,914	.1	.3	
Southwest . . .	2,273,340	2,446,481	.1	7.6	
Trans-Mississippi . . .	1,340,674	1,462,066	.1	9.1	
Total All Boards . . .	29,081,657	29,078,352	.01	.1	

Equipment and Supplies

LOCOMOTIVES

Susquehanna Plans Complete Dieselization

The New York, Susquehanna & Western has been authorized by the United States district court at Newark, N. J., to purchase eight Diesel-electric road locomotives of 1,000 hp. each and an order for these engines has been placed with the American Locomotive Company. It is the railroad's intention to use these locomotives to completely Dieselize its present passenger-train service and, with the return of its freight traffic to pre-war levels, to eliminate steam locomotives altogether. Delivery of the first two of the locomotives is expected this year.

The CENTRAL OF NEW JERSEY has obtained War Production Board approval to equip 20 locomotives and 100 coaches with head-end lighting. Under the new system, a steam-operated turbo-generator will be installed on the locomotive tender to supply illumination for the entire train. Installations will begin as soon as the materials arrive. The railroad plans to equip 40 more locomotives and 200 cars in the same way in subsequent years so that all commuter coaches will have the new lighting. The present system using an individual battery on each car, charged by an axle-driven generator, presents battery-charging

difficulties on short runs with frequent stops.

FREIGHT CARS

Freight Car Backlog Will Be Exhausted Early in 1945

Total backlog of freight cars undelivered at June 30, 1944, comprised 46,921 cars of which all but 119 have been authorized for delivery by the War Production Board. Included are 45,026 cars (100 unauthorized) remaining to be shipped to 61 railroads and 1,895 cars (19 unauthorized) on order for private car lines and industrial companies. The 46,802 authorized consist of 30,826 scheduled for building in contract car builders' plants and 15,976 in railroad shops. Included in the total backlog are 19,903 box, 14,527 hopper, 8,265 gondola, 2,504 refrigerator, 421 flat, 500 stock, 405 tank, 87 dump and 309 caboose cars.

Delivery schedules on the 46,802 cars authorized call for the building of an average of 6,000 cars monthly during the last half of this year, or a total of 25,444 by contract builders and 10,788 by railroad shops. The balance of 5,382 cars on order with contract builders are scheduled to be turned out early in 1945. Most of the cars presently on order in railroad shops will also be completed during the first quarter, 1945, although in some instances these contracts run through the first six months of next year, with a greatly reduced output during the second quarter.

The ALTON has issued inquiries for 1,500 new freight cars including 1,000 50-ton box cars, 250 50-ton hopper cars and 250 50-ton gondola cars.

IRON AND STEEL

The CHILEAN Minister of Public Works and Communications has been authorized to purchase 26,000 tons of rails and 1,352 tons of fish plates, valued at approximately \$1,906,000, according to the Department of Commerce. Delivery is to be made over a period of four years.

Construction

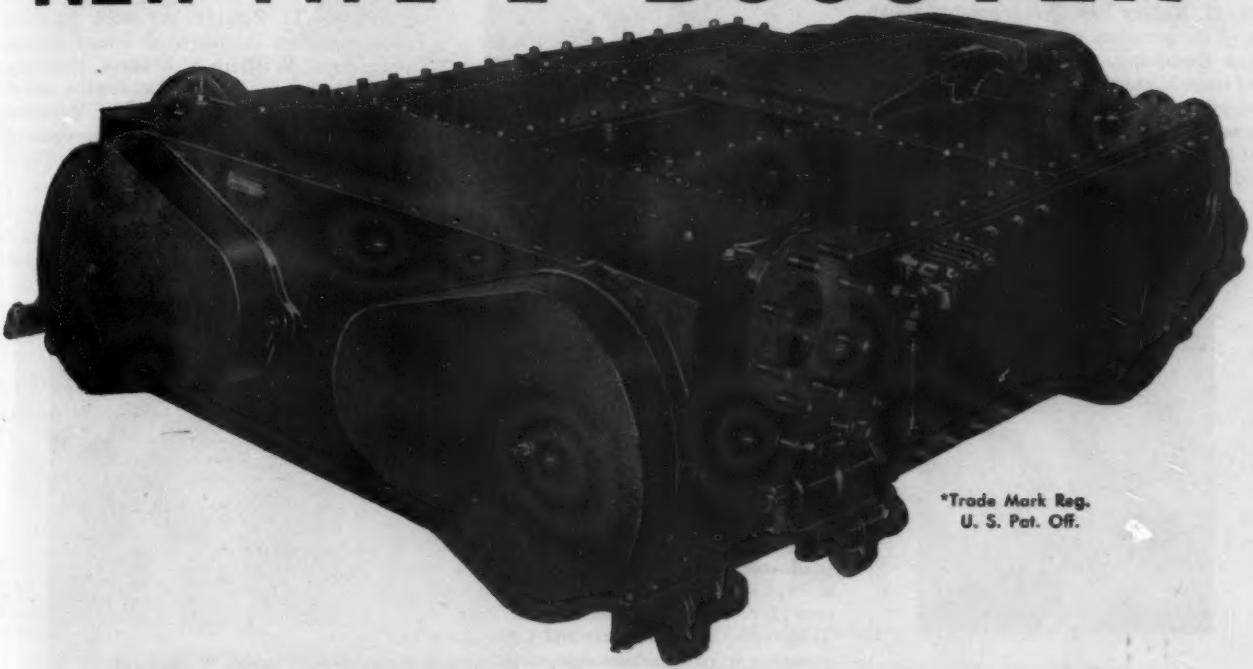
BALTIMORE & OHIO.—This railroad has awarded contracts for the reconstruction of five bridges on its Chicago division, at estimated cost of \$55,000, to George Vang, Inc., Pittsburgh, Pa., and for repairs to the retaining wall at Struthers, Ohio, at estimated cost of \$80,000, to the Bates & Rogers Construction Co., Chicago.

WAR DEPARTMENT.—The U. S. Engineer office, Los Angeles, Calif., has awarded a contract, amounting to \$266,095, to Shanahan Brothers, Inc., Huntington Park, Calif., for the construction of a hold yard in California. The U. S. Engineer office, Seattle, Wash., has awarded a contract, amounting to \$336,000 to the Peter Kewit Sons Company, Seattle, for the construction of a railroad, road and appurtenances in the State of Washington.



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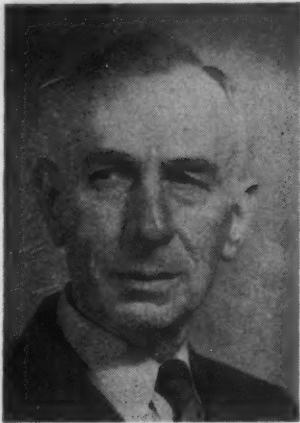
In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

Supply Trade

Pullman Chooses to Stay in Manufacturing

Directors of Pullman, Inc., have exercised the option given them by the court, in decreeing that the company should not engage both in manufacturing and in the operation of sleeping cars, and have decided to retain their manufacturing business and to withdraw from sleeping car operation. The company has until October 5 to submit a plan to the court for the disposal of its sleeping car business.

R. G. Kelley has been appointed assistant to the president of the Waugh Equipment Company. Mr. Kelley was graduated from Michigan University in 1908 with a degree in mechanical engineering. He began his career with the New York Central and was motive power inspector of that road from 1911 to 1916. He was employed



R. G. Kelley

as service engineer and district engineer with the Locomotive Stoker Company for the following 12 years and as service representative for the Worthington Pump & Machinery Corp. for two years. In 1930 he was appointed service engineer for the Firebar Corporation, which was merged in 1932 with the Waugh Equipment Company.

The Electro-Motive Division of **General Motors Corporation** will construct new facilities for the manufacture of spare parts. One building will house service repair and parts and will include modern facilities for the complete rebuilding of locomotives and all of their sub-assemblies, as well as production and storage of spare parts. The other will house the transmission division machine shop, locker room, cafeteria and receiving inspection and warehouse, according to C. R. Osborn, general manager. The growth of the spare parts and service-repair demands has resulted in the development of situation which seriously interferes with the meeting of demands for the production of engines and locomotives for

war purposes. In 1941, spare parts shipments averaged 790,000 lb. monthly while during March, 1944, they rose to 3,140,000 lb.

George S. Tanner, plant engineer of the Dallas, Tex., factory of the **National Battery Company**, has been appointed manager, equipment sales, with headquarters



George S. Tanner

at the company's general offices in St. Paul, Minn. Mr. Tanner began his career with National Battery in 1926 as manager of radio power unit production after serving for seven years with the Northwestern Bell Telephone Company. He subsequently was transferred to the engineering department where he was responsible for designing laboratory testing equipment. Following an assignment as sales engineer, he was appointed plant engineer of National's Dallas factory.

Gordon S. McKenty, whose appointment as general sales manager of **R. G. LeTourneau, Inc.**, Peoria, Ill., was reported in the *Railway Age* of July 15, was graduated from the University of Nebraska in 1924 and subsequently served as an engineer for the International Telephone & Telegraph Co., in Mexico and China, later engaging in construction equipment sales in



Gordon S. McKenty

Nebraska for five years prior to joining LeTourneau in 1935. With LeTourneau, Mr. McKenty began as a district sales representative, serving in a score of middle western and eastern states. From 1941 to 1943 he managed and expedited \$8,000,000

in War Department shell contracts filled by LeTourneau plants at Toccoa, Ga., and Vicksburg, Miss. In 1943 he started a reorganization of LeTourneau's parts shipping organization.

Two national awards were presented to the **Standard Stoker Company** of Erie, Pa., last month. On June 1, Lieut. Col. William E. Pierce, regional industrial protection officer, third civilian defense region, presented H. P. Farrington, president of the company, with the National Security Award, signifying extraordinary achievement in establishing and maintaining superior security and protection measures and on June 23, Brigadier General Burton O. Lewis, assistant chief of the transportation command and director of supply, presented to the company the Army-Navy "E" pennant for outstanding achievement in the production of war equipment.

Perry T. Egbert has been appointed vice-president in charge of Diesel locomotive sales; **William S. Morris**, vice-president in charge of steam locomotive and divisional sales; and **James D. Vaughan**, comptroller, of the **American Locomotive Company**. Mr. Egbert and Mr. Morris



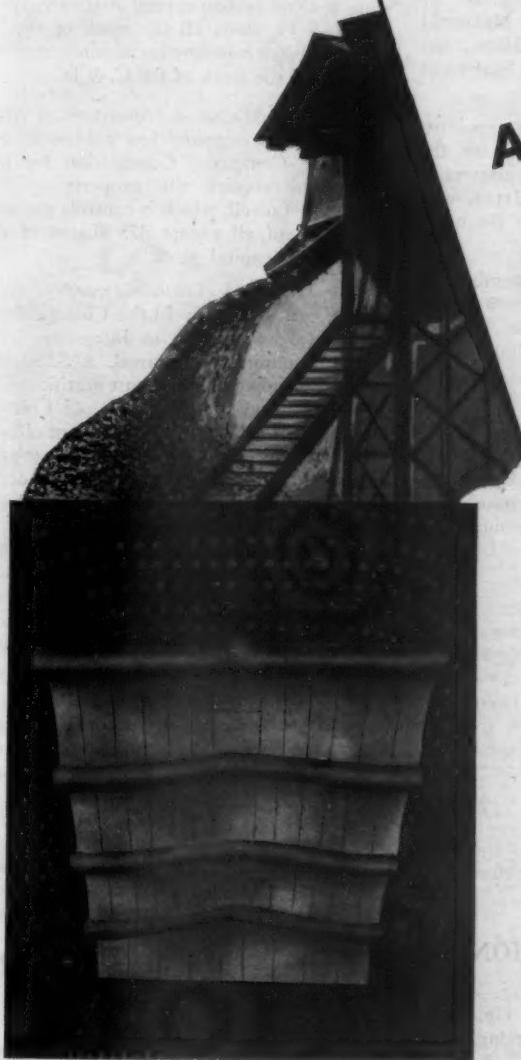
Perry T. Egbert

will report to Frank J. Foley, vice-president in charge of sales.

Mr. Vaughan will succeed **W. L. Mulle**, who has resigned. Mr. Egbert was graduated from Cornell University in 1915 with a degree in mechanical engineering. He served as a special apprentice in the Sayre, Pa., shops of the Lehigh Valley from 1911 to 1914 and was employed in various positions with other railways, including the Norfolk & Western, from 1914 to April, 1917. He was a pursuit pilot in the U. S. Air Corps from April, 1917 to July, 1919 and an instructor in experimental engineering at Cornell University from July, 1919 to June, 1920. He joined the engineering department of the American Locomotive Company at Schenectady, N. Y., in June, 1920 and later in the same year was transferred to the foreign sales department. He was appointed technical representative in the Far East in 1921, returning to this country in 1924 to serve in the domestic sales and manufacturing departments until 1929. Following the acquisition of the McIntosh & Seymour Corp., he was assigned to that

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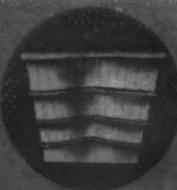
The railroads have to haul every ton of coal they burn.

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Experience has proved that only with a complete locomotive arch can maximum fuel economy be realized.

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.**

*Locomotive Combustion
Specialists*

company as American Locomotive Company representative for developing a Diesel engine suited for railway work. Upon completion of the design, he was appointed in charge of developing and servicing American Locomotive Company Diesel locomotives.



William S. Morris

tives, and subsequently appointed manager of the company's railway Diesel sales division.

Mr. Morris was formerly executive vice-president of the Montreal Locomotive Works, Ltd., the company's Canadian subsidiary. He served in the U. S. Army during the first World War and was graduated from the United States Naval Academy in 1922. He began his career with the American Locomotive Company in 1922 as a special apprentice in the Schenectady, N. Y., plant. From 1926 to 1940, when he became vice-president of the Montreal subsidiary, he held various sales positions with the company, including a four-year period as district sales manager with headquarters in Chicago. Mr. Vaughan has been executive assistant to the president for seven years. He attended the Bentley School of Accounting and Boston University. He was formerly with Price, Waterhouse & Co., as

been elected executive vice-president; J. J. Root, Jr., assistant to vice-president, has been elected vice-president to succeed Abram E. Smith, retired; and R. C. Eustice, treasurer, has been elected vice-president and treasurer. At the same time J. E. Harley and A. E. Gebhardt have been promoted to assistants to the executive vice-president; F. McElroy has been promoted to assistant to the vice-president; A. C. Sanden to assistant treasurer; and A. Schiffers, Jr., to purchasing agent.

M. W. Field, procedure supervisor of the United States Steel Corporation, has been appointed comptroller of the **American Steel & Wire Co.**, U. S. Steel subsidiary.

George S. Tanner, plant engineer of the Dallas, Tex., factory of the **National Battery Company**, St. Paul, Minn., has been promoted to manager of equipment sales.

William E. Kress has been appointed sales manager in the middle west for the **Philco Corporation**, with headquarters in Chicago, to succeed John M. Otter, who was appointed sales manager for the home radio division.

The annual mid-western membership luncheon of the **Railway Business Association** was held at Chicago on July 13. Clyde Williams, technical consultant of the Association of American Railroads, was the guest speaker.

Brace-Mueller-Huntley, sales representatives for the steel and tube division of **The Timken Roller Bearing Company**, Canton, Ohio, for electric furnace alloy steels and seamless alloy steel tubing, have also been appointed representatives for Timken stainless steels.

Morris H. Schwenk has been elected president of **Busch-Sulzer Bros.-Diesel Engine Company** to succeed Edward B. Pollister, who has retired. Mr. Schwenk was an officer of the Baldwin Locomotive Works for many years and was formerly president of the De La Vergne Engine Company.

OBITUARY

George C. Purdy, chairman of the board of Greenlee Bros. & Co., Rockford, Ill., died on July 2.

TRADE PUBLICATIONS

LeTourneau Guide for Buyers.—A new 12-page brochure entitled "A Guide for Your Postwar Equipment Buying," has recently been published by R. G. LeTourneau, Inc., Peoria, Ill. Designed to discuss five important factors concerning postwar purchasing of earthmoving machinery, the brochure utilizes text and pictures to tell of the record number of LeTourneau products which have been manufactured during the past ten years alone, uses job notes and illustrations, and lists and describes 17 important units which the company has introduced to the earthmoving and construction industries, including Tournapulls, power control units, dozers, carryall scrapers, rooters, cranes, sheep's foot rollers and trailers.



James D. Vaughan

supervising accountant and was in charge of the United Fruit Company accounting office in Cuba for a number of years.

B. C. Graves, vice-president of the **Union Tank Car Company**, Chicago, has

Financial

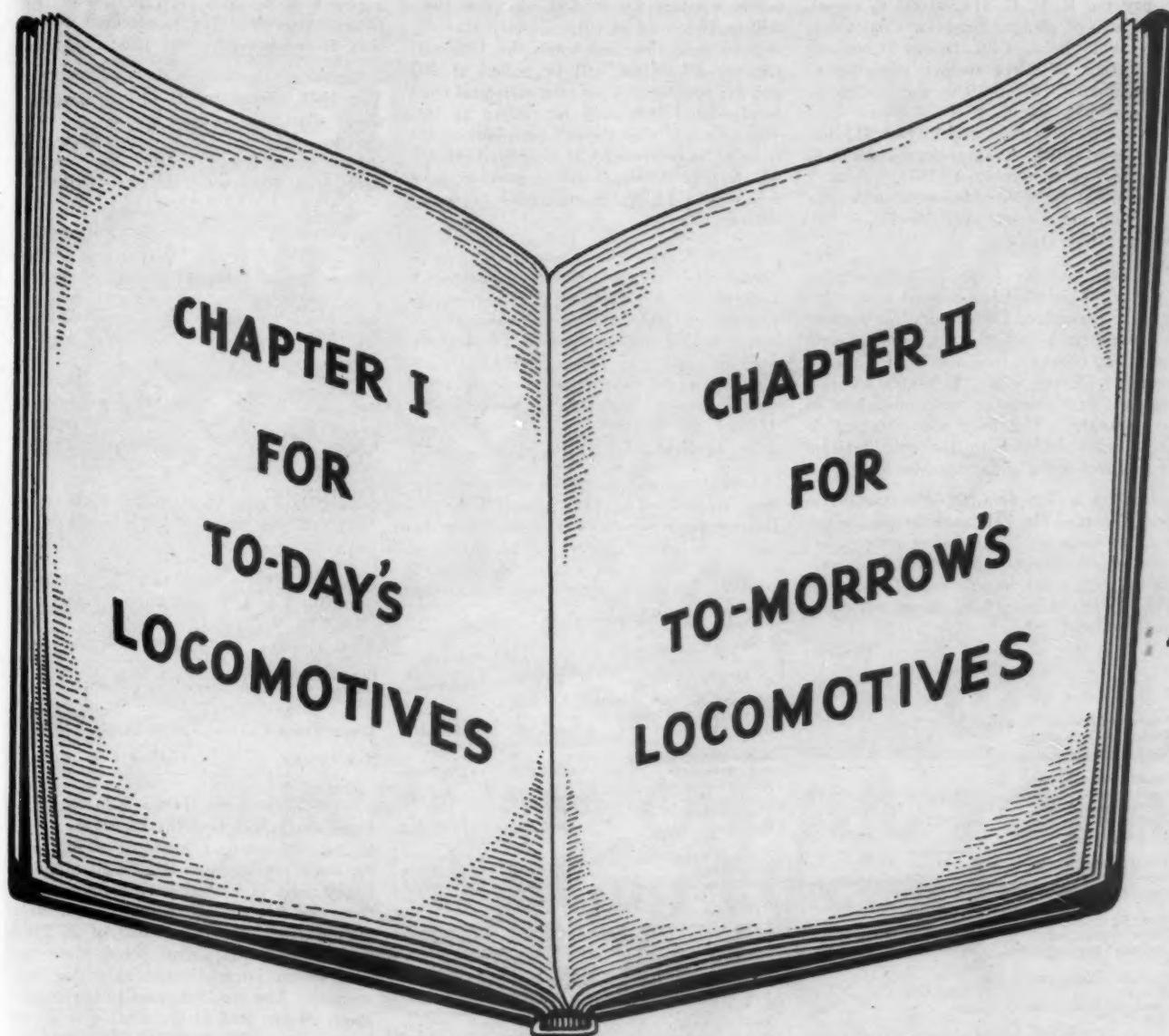
BALTIMORE & OHIO.—Merger of Subsidiaries.—Taking the position that "the minority stock outstanding in interest of unknown beneficiaries constitutes a cloud upon the title of the property which should not be imposed indefinitely," Division 4 of the Interstate Commerce Commission in a supplemental report has removed the condition with respect to the purchase of certain minority shares previously imposed in its order authorizing the Toledo & Cincinnati to acquire the property of the Cincinnati & Dayton (noted in *Railway Age* of January 8, page 177). The purpose of the transaction is to effect simplification of the Baltimore & Ohio system capital structure, since the B. & O. owns all the stock of the T. & C. and that company owns more than 97 per cent of the stock of the C. & D.

BOSTON & MAINE.—Acquisition of Subsidiary.—This company has applied to the Interstate Commerce Commission for authority to acquire the property of the Nashua & Lowell, which it controls through ownership of all except 375 shares of the outstanding capital stock.

CHESAPEAKE & OHIO.—Awards Equipment Trust.—On July 13 the Chesapeake & Ohio awarded, subject to Interstate Commerce Commission approval, a \$2,500,000 issue of serial equipment trust certificates of 1944 to Halsey, Stuart & Co. of Chicago on a bid of 100.0875 for 1 3/4 per cent obligations, an interest cost basis to the company of approximately 1.733 per cent. The certificates will be dated July 15, 1944, and will mature in ten equal annual installments of \$250,000 each, beginning in 1945. Proceeds of the issue will finance in part the purchase of 1,250 50-ton all steel hopper cars, to cost approximately \$3,213,850. The issue was reoffered to the public at prices to yield from 0.85 to 1.875 per cent.

CHICAGO & EASTERN ILLINOIS.—Trackage Rights.—Upon reconsideration, the Interstate Commerce Commission has authorized this company to acquire trackage rights over 3.74 miles of a line owned by the Chicago, Terre Haute & Southeastern and operated by the Chicago, Milwaukee, St. Paul & Pacific, extending from Baker-Glendora mine No. 28 to Peerless Mine, Ind., and to construct a 400-ft. connecting track at the latter point. Division 4 of the commission had denied the application, as noted in *Railway Age* of October 23, 1943, page 669, on the ground that the terms of the agreement between the two roads did not allow the C. & E. I. to operate over the line in question, so that no trackage rights were conferred. The modified agreement, as now approved by the commission, does not contain this objectionable provision, according to the report.

CHICAGO & NORTH WESTERN.—Indebtedness.—The board of directors of the Chicago & North Western, on July 13, voted to pay the Reconstruction Finance Corporation approximately \$24,200,000 by August 10, 1944, which will reduce the company's indebtedness to that corporation to approximately \$22,630,000, all represented by collateral notes. In addition, action was taken



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to pay the R. F. C. \$11,500,000 to secure the return of pledged Superior Coal Company and Sioux City Bridge Company stock, thus in effect further reducing to approximately \$11,100,000 the collateral notes held by the R. F. C.

A special preferred dividend of \$15 per share was voted on the preferred stock, to be paid, on September 1, 1944, on stock of record at the close of business on August 11, from net income available as of December 31, 1943.

DENVER & SALT LAKE.—Pledge of Securities.—This road has applied to the Interstate Commerce Commission for authority to pledge as security for a short-term bank loan obtained from the First National Bank of Denver, Colo., \$1,000,000 of its 4 per cent first mortgage bonds now held in its treasury. The loan was obtained to meet costs incident to the rehabilitation of a tunnel recently damaged by fire.

DENVER & RIO GRANDE WESTERN.—Annual Report.—The 1943 annual report of this road shows a net income, after interest and other fixed charges, of \$5,907,760, as compared with a net income of \$11,306,966 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	2,404.08	-12.30
RAILWAY OPERATING REVENUES	\$70,194,002	+\$15,718,506
Maintenance of way and structures	7,917,772	+3,972,024
Maintenance of equipment	14,310,736	+5,371,677
Transportation	20,385,731	+4,765,667
TOTAL OPERATING EXPENSES	46,001,500	+14,740,806
Operating ratio	65.53	+8.15
NET REVENUE FROM OPERATIONS	24,192,502	+977,701
Railway tax accruals	10,429,035	+5,443,219
Hire of equipment—Net Dr.	1,388,958	+713,487
Joint facility rents—Net Dr.	323,685	-624
NET RAILWAY OPERATING INCOME	12,050,824	-5,178,382
Other income—Net Dr.	477,156	+292,371
GROSS INCOME	12,305,023	-5,139,414
Rent for leased roads	199,769	+88,060
Interest on funded debt	5,665,908	-71,547
TOTAL FIXED CHARGES	6,397,263	+259,791
NET INCOME	5,907,760	-5,399,206

ERIE.—Equipment Trust Certificates.—This company has applied to the Interstate Commerce Commission for authority to assume liability for \$3,620,000 of equipment trust certificates of 1944, to be issued in connection with the purchase, at a total cost of \$4,549,656, of 600 50-ton all-steel hopper cars and six 5,400-hp. Diesel-electric freight locomotives.

GREAT NORTHERN.—Refinancing.—It was announced in New York on July 19 that this company will redeem \$119,887,700 of its outstanding unmatured bonds and notes. First and refunding 4½ per cent bonds, due 1961, totaling \$35,668,000 will be called at 105. General mortgage series G 4 per cent convertible bonds, due 1946, totaling \$25,138,950 will be redeemed at 101. Series H general mortgage 4 per cent convertible

bonds, totaling \$31,385,750, also due 1946, will be redeemed at 101. Eastern Railway of Minnesota 4 per cent bonds, due 1948, and totaling \$9,695,000 will be called at 105 and \$18,500,000 of 4 per cent collateral trust bonds dated 1940 will be retired at 104. The principal plus the call premium on the issue to be redeemed will total \$123,441,097, of which \$100,000,000 will be provided by a new issue of general mortgage bonds and the balance in cash.

GREAT NORTHERN.—Promissory Note.—Division 4 of the Interstate Commerce Commission has authorized this company to issue a \$3,002,876 promissory note in evidence of, but not in payment for, the unpaid purchase price of six 5,400-hp. Diesel-electric freight locomotives to be delivered by the Electro-Motive Division of General Motors Corporation under a conditional sales agreement.

INTERNATIONAL GREAT NORTHERN.—Annual Report.—The 1942 annual report of this company shows a net income, after interest and other charges of \$2,220,615, as compared with a net income of \$3,162,528 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	1,154.51	.....
RAILWAY OPERATING REVENUES	\$29,595,900	+\$7,835,377
Maintenance of way and structures	4,741,657	+2,045,406
Maintenance of equipment	3,659,136	+511,872
Transportation—Rail line	8,807,582	+1,903,552
TOTAL OPERATING EXPENSES	18,714,677	+4,725,808
Operating ratio	63.23	-1.05
NET REVENUE FROM OPERATIONS	10,881,223	+3,109,569
Railway tax accruals	4,229,212	+3,344,622
RAILWAY OPERATING INCOME	6,652,011	-235,053
Net Rents—Dr.	1,731,202	+630,688
NET RAILWAY OPERATING INCOME	4,920,809	-865,742
Total other income	235,956	+38,147
TOTAL INCOME	5,156,765	-827,594
Interest on funded debt	2,783,340	+11,044
TOTAL FIXED CHARGES	2,784,542	-3,127
INCOME TRANSFERRED TO EARNED SURPLUS	2,220,615	-941,913

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Reorganization.—Division 4 of the Interstate Commerce Commission has authorized the Minneapolis, St. Paul & Sault Ste. Marie Railroad Co. to acquire the property of the railway company of the same name, and to issue securities and assume obligations in conformity with the plan of reorganization approved by the commission and the federal court (the terms of which were reported in *Railway Age* of March 28, 1942, page 654, and June 27, 1942, page 1257).

MINNEAPOLIS & ST. LOUIS.—Promissory Note.—This company has applied to the Interstate Commerce Commission for authority to issue a \$1,438,895 promissory note in evidence of, but not in payment for, the unpaid portion of the purchase price of 500 50-ton box cars to be obtained, under

a conditional sales contract with the General American Transportation Corporation, at an aggregate cost of \$1,798,620.

MISSOURI PACIFIC.—Annual Report.—The 1943 annual report of this company shows a net income, after interest and other charges, of \$16,591,415, as compared with a net income of \$30,649,668 in 1942. Selected items from the income statement follow:

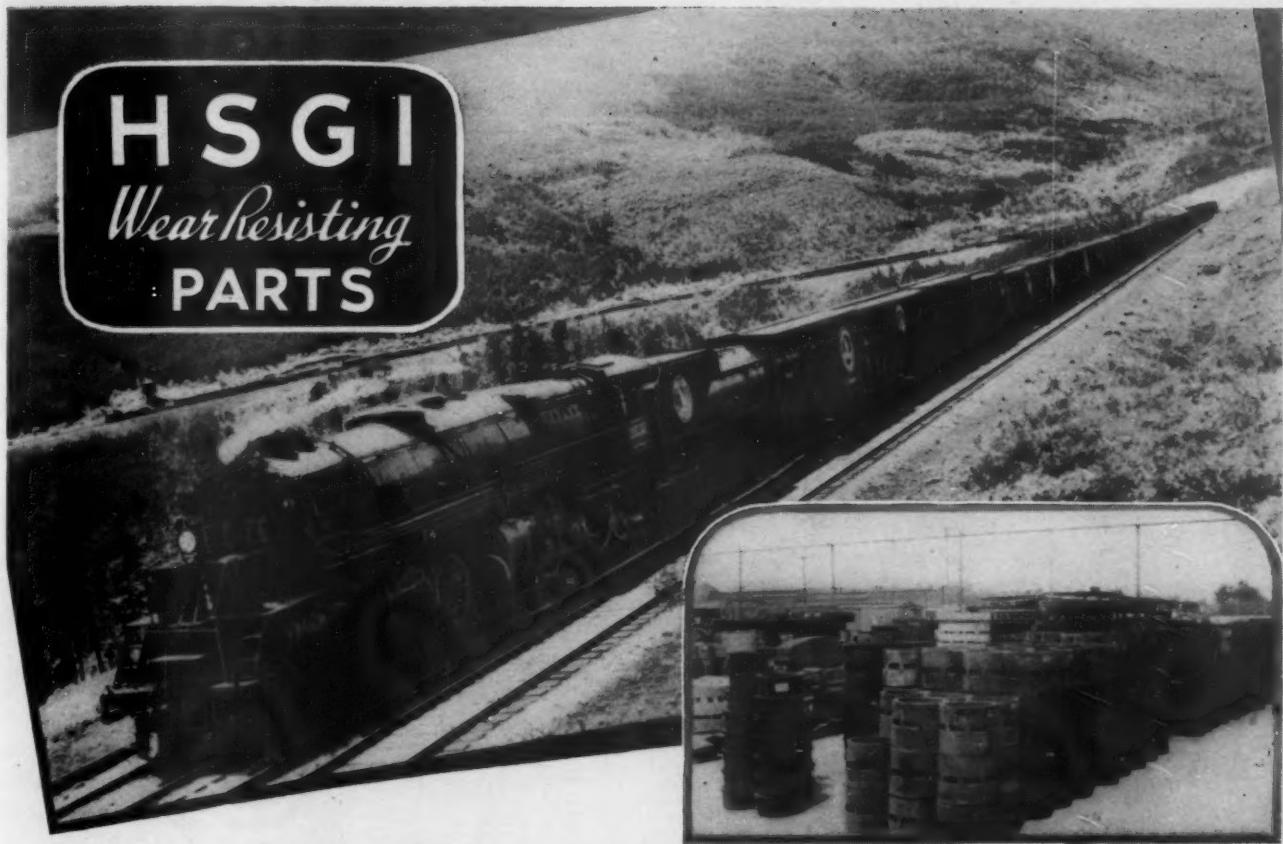
	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	7,096.49	-31.66
RAILWAY OPERATING REVENUES	\$227,793,238	+\$49,368,739
Maintenance of way and structures	25,260,359	+6,613,411
Maintenance of equipment	28,838,152	+5,339,402
Transportation—Rail line	60,574,568	+9,645,526
TOTAL OPERATING EXPENSES	124,135,469	+23,024,714
Operating ratio	54.49	-2.18
NET REVENUE FROM OPERATIONS	103,657,770	+26,344,025
Railway tax accruals	58,724,055	+40,271,784
RAILWAY OPERATING INCOME	44,933,715	-13,927,758
Net rents—Dr.	10,359,336	+807,164
NET RAILWAY OPERATING INCOME	34,574,379	-14,734,923
Total other income	2,817,718	-476,824
TOTAL INCOME	37,392,097	-14,258,098
Rent for leased roads	110,464	-894
Interest on funded debt	20,507,888	-199,681
TOTAL FIXED CHARGES	20,659,353	-196,498
NET INCOME	16,591,415	-14,058,254

NEW YORK, NEW HAVEN & HARTFORD.—Promissory Notes.—This road has applied to the Interstate Commerce Commission for authority to issue \$4,925,520 of promissory notes in connection with its purchase from the American Locomotive Co. under a conditional sales agreement of 30 2,000-hp. Diesel-electric road locomotives and 12 1,000-hp. Diesel-electric switching locomotives. The road proposes to pay in cash about 20 per cent of the total cost of this equipment, which is \$6,158,820.

NEW ORLEANS, TEXAS & MEXICO.—Annual Report.—The 1943 annual report of this company shows a net income, after interest and other charges, of \$2,559,839, as compared with a net income of \$6,146,031 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	1,733.89	-30.39
RAILWAY OPERATING REVENUES	\$43,564,237	+\$12,250,451
Maintenance of way and structures	5,670,818	+1,913,497
Maintenance of equipment	3,723,023	+643,479
Transportation—Rail line	9,891,656	+1,881,360
TOTAL OPERATING EXPENSES	20,936,845	+4,659,831
Operating ratio	48.06	-3.92
NET REVENUE FROM OPERATIONS	22,627,393	+7,590,620
Railway tax accruals	14,266,818	+10,700,580
RAILWAY OPERATING INCOME	8,360,575	-3,109,960
Net rents—Dr.	3,208,249	+658,667
NET RAILWAY OPERATING INCOME	5,152,326	-3,768,626
Total other income	230,348	+52,027

H S G I
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PARTS



KEEP 'EM ON THE ROAD Working Efficiently

TODAY when every unit of motive power is needed so urgently, the wear-resisting qualities of HUNT-SPILLER Air Furnace GUN IRON play an important role in keeping locomotives in service operating efficiently. Applications of HSGI parts will be found on high-speed streamlined units—on heavy, articulated power and on practically all of the modern locomotives constructed during recent years. The extra service life built into HSGI castings is one of the biggest helpers contributing to fewer failures, greater mileage between renewals and a substantial booster of locomotive efficiency and economy.

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Cylinder Bushings
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Finished Parts

Dunbar Sectional Type Packing
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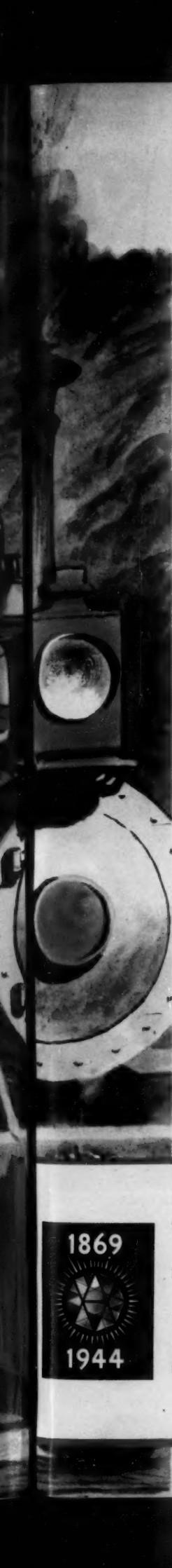
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Air Furnace



1869



IT STOPPED WITHOUT A WHISTLE

and 300 people marveled!

The high point in the annual meeting of the American Railway Master Mechanics Association, back in September, 1869, was a trip from Pittsburgh to Altoona. No pains or expense had been spared to make this a gala affair. The appointments of the coaches were luxurious, and the baggage car, converted into a buffet diner, offered a variety of appetizing foods. Added interest and excitement were provided by an innovation in mechanical equipment; the train was fitted with the new-fangled Westinghouse Air Brake.

In the trains these passengers had known, "whistling for brakes" was part of the routine at every station stop, and on every grade. Now, for the first time, they saw a train slow to a halt, with no scurrying brakemen "museling" the brake wheels around. They saw a train come around the spectacular Horseshoe Curve, its speed under complete one-man control. At one point, the party disembarked and walked to some nearby point of interest. And when the engineer brought the train down, there were exclamations of amazement when he, with the mere movement of a handle, stopped on a steep grade within a distance of 50 feet. They had witnessed the end of an era: the whistle was no longer a vital part of the braking equipment.

75 Years of Pioneering

WESTINGHOUSE AIR BRAKE COMPANY, WILMERDING, PA.

1869

TO PERMIT TODAY'S TRAINS TO
MOVE AT SHORTER INTERVALS
WITH HEAVIER LOADS AT HIGHER
SPEEDS—SAFELY.
1944

The contribution the first air brake made to railroad service and safety was merely the beginning. Development has been continuous. Westinghouse Air Braking equipment is always abreast of every transportation need.

Just in case you've eased up...
ON YOUR PAY ROLL PLAN



Pause one brief moment. Compare your lot—and that of the men and women in your employ—with the lot of the infantrymen who meet the enemy face to face, who do the hardest fighting, who suffer the most casualties.

Let the full impact of war's unending grimness swiftly convert any tendency toward complacency into revitalized urgency. Remember—the war is not yet won.

As top management and labor, you've been entrusted with two major responsibilities—steadily maintained production, and steadily maintained War Bond Sales through your Pay Roll Savings Plan.

Decide now to revitalize your plant's Pay Roll Plan. Have your Bond Committee recheck all employee lists for percentages of participation and individual deductions. Have Team Captains personally contact each old and new employee. Raise all percentage figures wherever possible.

Don't underestimate the importance of this task. This marginal group represents a potential sales increase of 25% to 30% on all Pay Roll Plans!

Your success will be twofold: A new high in War Bond Sales; and a new high in production. Because a worker with a systematic savings plan has his mind on his work—not on post-war financial worries. He's taking care of the future now. His own. And his Country's future. *Help him! REVITALIZE YOUR WAR BOND PAY ROLL SAVINGS PLAN.*



Official U. S. Coast Guard Photo: The elevator to a Coast Guard-operated transport hospital



**Back the Attack!
SELL MORE THAN BEFORE!**

The Treasury Department acknowledges with appreciation the publication of this message by

RAILWAY AGE

This is an official U. S. Treasury advertisement—prepared under the auspices of Treasury Department and War Advertising Council.

TOTAL INCOME	5,382,674	-3,716,599
Rent for leased roads and equipment	650	-2,695
Interest on funded debt	2,786,739	+5,104
TOTAL FIXED CHARGES	2,792,489	-24,023
NET INCOME TRANSFERRED TO EARNED SURPLUS	2,559,839	-3,586,192

NEW YORK, NEW HAVEN & HARTFORD.—*Annual Report.*—The 1943 annual report of this road shows a net income, after interest and other fixed charges, of \$22,901,437, as compared with a net income of \$19,912,115 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated RAILWAY OPERATING REVENUES	\$179,548,274	+\$23,408,081
Maintenance of way and structures	21,576,379	+6,112,125
Maintenance of equipment	24,402,004	+3,744,110
Transportation	56,815,721	+8,642,913
TOTAL OPERATING EXPENSES	112,238,922	+19,522,580
Operating ratio	62.51	+3.13
NET REVENUE FROM OPERATIONS	67,309,352	+3,885,501
Railway tax accruals	24,415,691	+2,160,515
RAILWAY OPERATING INCOME	42,893,661	+1,724,986
Net rents—Dr.	12,101,721	+945,890
NET RAILWAY OPERATING INCOME	30,791,940	+779,096
Other income	5,447,638	+1,847,574
TOTAL INCOME	36,239,578	+2,626,670
Rent for leased roads	681,604	+537
Interest on funded debt	12,158,858	+91,133
TOTAL FIXED CHARGES	12,918,685	-151,217
NET INCOME	*22,901,437	+2,989,322

* Includes accrued and unpaid real estate taxes on Old Colony and Boston & Providence properties; also accrued and unpaid charges against said properties for Boston Terminal Company taxes and bond interest.

RUTLAND.—*Reorganization.*—This road has filed with the Interstate Commerce Commission the petition for its reorganization under the provisions of section 77 of the Bankruptcy Act which was granted by the federal district court. The trustees named by the court, William E. Navin and Wallace M. Fay, at the same time asked the commission to ratify their appointments.

SEABOARD AIR LINE.—*Equipment Trust Awarded.*—The Seaboard Air Line has awarded a \$2,760,000 issue of equipment trust certificates to Harris, Hall & Co. and associates on a bid of 99.53 for 2 per cent obligations. The issue was reoffered to the public at prices to yield from 0.90 to 2.52 per cent according to maturity. (Previous item in *Railway Age* of July 8, page 101.)

SEABOARD AIR LINE.—*Bond Retirement Urged.*—A group of holders of Atlanta-Birmingham division first mortgage 4 per cent bonds have petitioned the federal district court to authorize a request for tenders on \$22,643,000 of six underlying bond issues in the interest of expediting the Seaboard's reorganization. The group has asked that \$15,000,000 be appropriated for the purpose. In the petition it was estimated

that as of April 30, \$18,758,000 was safely available for further debt retirement.

SEABOARD AIR LINE.—*Annual Report.*—The 1943 annual report of this company shows a net income, after interest and other fixed charges, of \$15,796,841, as compared with a net deficit of \$2,819,263 in 1942. Selected items from the income statement follows:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated RAILWAY OPERATING REVENUES	\$137,257,803	+\$27,015,428
Maintenance of way and structures	15,485,832	+4,456,969
Maintenance of equipment	18,195,593	+1,053,314
Transportation	38,862,220	+6,674,734
TOTAL OPERATING EXPENSES	80,823,710	+13,813,352
Operating ratio	58.88	-1.90
Railway tax accruals	22,186,791	+17,029,058
RAILWAY OPERATING INCOME	34,247,302	-3,826,982
Hire of equipment—Net Dr.	5,270,661	+1,354,153
Joint facility rents—Net Dr.	272,636	+60,830
NET RAILWAY OPERATING INCOME	28,704,006	-5,241,965
Total other income	505,592	+36,682
TOTAL INCOME	29,209,598	-5,205,282
TOTAL DEDUCTIONS FROM GROSS INCOME	13,412,757	-23,821,386
NET INCOME	15,796,841	+18,616,104

WHEELING & LAKE ERIE.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for \$920,000 of series K equipment trust certificates to be issued and sold at competitive bidding in connection with the purchase from the Bethlehem Steel Co., at a total cost of \$1,235,300, of 500 high-side, all-steel gondolas of 50 tons capacity.

Average Prices Stocks and Bonds

	July 18	Last week	Last year
Average price of 20 representative railway stocks..	41.82	42.39	39.00
Average price of 20 representative railway bonds..	89.96	89.71	80.23

Dividends Declared

Chicago Great Western.—5% preferred (accum.), 62½%, payable September 29 to holders of record September 14.

Chicago & Northwestern.—Preferred (special), \$15.00, payable September 1 to holders of record August 11. Representing dividends due for 1941, 1942, and 1943.

Cleveland, Cincinnati, Chicago & St. Louis.—Common, \$5.00, semi-annually; 5% preferred, \$1.25, quarterly; both payable July 31 to holders of record July 21.

Mine Hill & Schuykill Haven.—\$1.00, semi-annually, payable August 1 to holders of record July 15.

North Carolina.—7% gtd., \$3.50, semi-annually; payable August 1 to holders of record July 21.

Peoria & Bureau Valley.—\$2.25, irregular, payable August 10 to holders of record July 20.

Troy & Bennington.—\$5.00, semi-annually, payable August 1 to holders of record July 21.

Railway Officers

EXECUTIVE

D. C. Fitch has been appointed assistant to the vice-president, operations, of the Texas & Pacific, with headquarters at Dallas, Tex.

Operating headquarters of the Blue Ridge Ry.; the Carolina & Northwestern; Danville & Western; High Point, Randleman, Asheboro & Southern; the Yadkin, and the Chattanooga Traction Co., all subsidiaries of the Southern Railway System, were transferred July 15, from Washington, D. C., to Charlotte, N. C. The move was effected to permit **M. Hurt Ramsey**, vice-president, and **J. D. Sutphen**, engineer of maintenance of way, and their office personnel, to be nearer the lines involved. For many years prior to World War I, these railroads were operated from headquarters at Atlanta, Ga., and when federal control of the railroads terminated in 1920, their headquarters were moved to Washington. In addition to responsibility for the railroads mentioned, Mr. Ramsey and Mr. Sutphen have supervisory jurisdiction over the operations of the Birmingham (Ala.) Terminal Co.; the Meridian (Miss.) Union Station; Gulf Terminal Co., Mobile, Ala.; Chattanooga (Tenn.) Station Co.; Durham (N. C.) Union Station; Columbia (S. C.) Union Station; North Charleston (S. C.) Terminal Co.; and the Winston-Salem (N. C.) Station Co.

OPERATING

W. A. Parker, auditor and general manager of the Bonhomie & Hattiesburg Southern, with headquarters at Hattiesburg, Miss., has retired after 45 years service.

A. J. Finn has been appointed director of accident prevention of the St. Louis-San Francisco, with headquarters at Springfield, Mo., to succeed **E. A. Teed**, who has been assigned to other duties.

A. L. Kleine, division engineer of the Grand Junction division of the Denver & Rio Grande Western, with headquarters at Grand Junction, Colo., has been appointed roadmaster-trainmaster, with headquarters at Gunnison, Colo., a newly-created position.

T. L. Nichols has been appointed general superintendent of transportation and mechanical departments of the Atlanta & St. Andrews Bay, with headquarters at Dothan, Ala. He was formerly superintendent of motive power of that road.

A. W. Osborne, whose appointment as superintendent, Russell division, of the Chesapeake & Ohio, was announced in the *Railway Age* of June 24, was born at Greenup County, Ky., on November 23, 1890. On May 23, 1905, he entered the service of the Chesapeake & Ohio as a caller, being promoted to check clerk in 1906. Mr. Osborne became assistant yardmaster in 1910, and yardmaster in 1911. In 1921 he was named general yardmaster, and was ad-

Abandonments

SOUTHERN PACIFIC.—This road and the Central Pacific have asked the Interstate Commerce Commission for authority, respectively, to abandon operation of, and abandon the 1.3-mile segment of the C. P.'s Alvarado branch in Alameda County, Calif.

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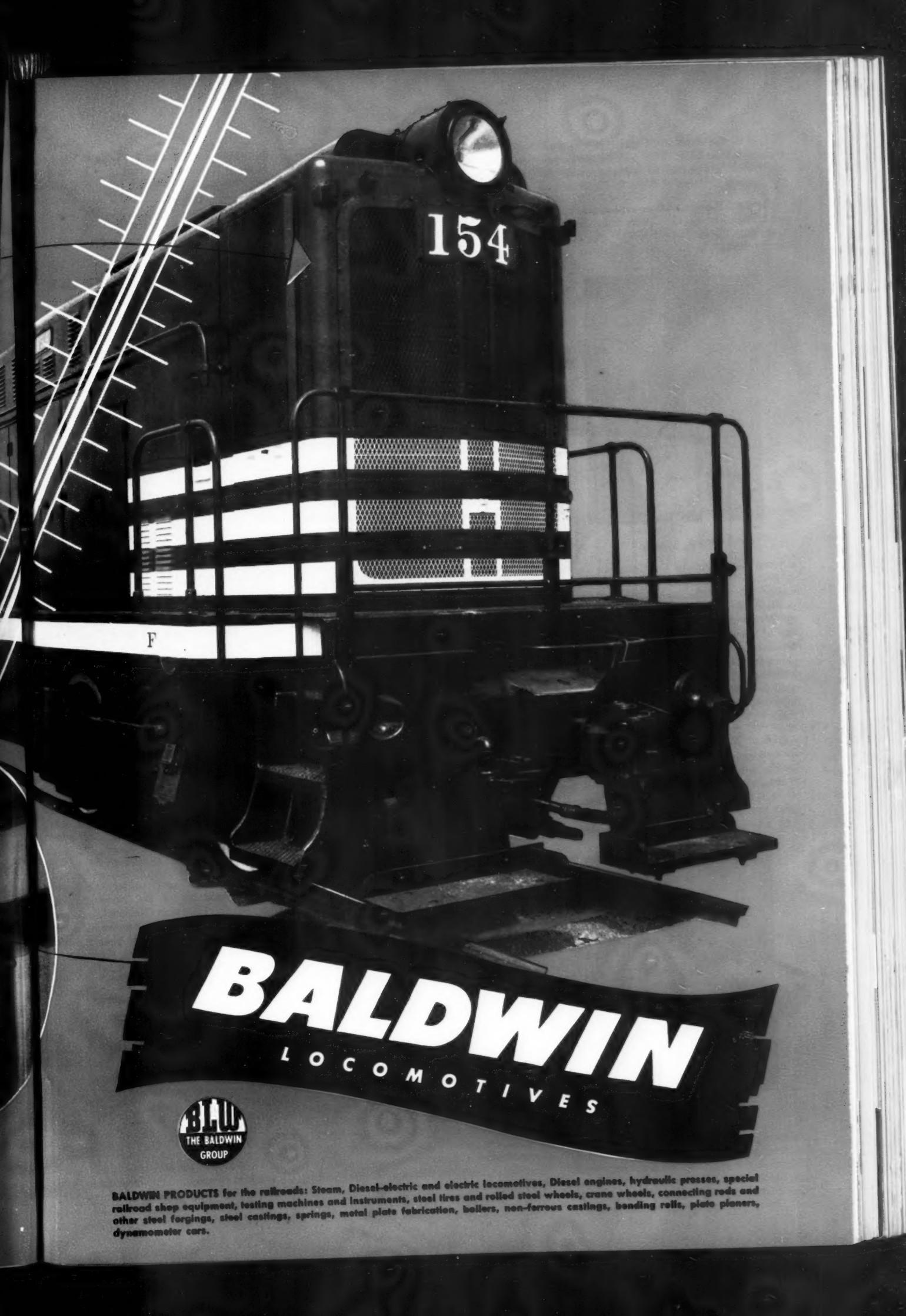
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vanced to the position of assistant terminal trainmaster in 1926. This post he held until his recent promotion to superintendent of the Russell division at Russell, Ky.

W. F. Koehn, whose appointment as superintendent of the Laurentian division, Canadian Pacific, to succeed F. A. Pouliot was reported in the July 1 *Railway Age*,



W. F. Koehn

entered the service of the Canadian Pacific in 1916, in the maintenance of way department. In 1921 he was appointed to the position of bridge and building master of the Montreal terminals, and in 1938 he was named division engineer of the Laurentian division. Four months ago Mr. Koehn was promoted to assistant superintendent of the Laurentian division, serving in that capacity until his present promotion to the post of superintendent, with headquarters at Montreal.

Arthur Murdock Hand, whose appointment as superintendent of the Toronto Terminals, succeeding **J. Robert W. Ambrose**, was announced in the *Railway Age* of July 1, joined the Canadian Pacific as office boy in the law department at Montreal, Que., on May 15, 1932. He became



Arthur Murdock Hand

secretary to the superintendent at London, England, on January 7, 1929, and held that post for eight years before entering the office of the general superintendent at Toronto, Ont., as a clerk. On June 1, 1941, Mr. Hand was appointed terminal clerk in

the same office, and on September 1, 1942, was promoted to the post of assistant superintendent of the Laurentian division, at Montreal. He was transferred to assistant superintendent of the Toronto and Bruce divisions on February 20, 1943, continuing in that capacity until his present advancement to superintendent of the Toronto Terminals, which controls the Union Station, Toronto. Mr. Ambrose, whose retirement was announced also in the July 1 *Railway Age*, joined the Union Station at Toronto in 1909, becoming a joint employee of the Canadian National and the Canadian Pacific. In 1929 he became superintendent of the Toronto Terminals in charge of the new Union Station, the plans of which he helped to draw up in 1912. Mr. Ambrose, who was employed for 35 years at Union Station, was chief engineer there for ten years. Prior to his career at the station, he spent two years with the Grand Trunk and ten years on western railroads in the United States.

Cecil Wray Johnston, general passenger traffic manager of the Canadian National, will retire from that position effective July 27, completing a service that has extended over a half century. Mr. Johnston was born at Actonvale, Que., on July 27,



Cecil Wray Johnston

1879, and entered railroading when he was 15, in the operating department of the Grand Trunk (now Canadian National). He attended St. Francis College at Richmond, Que., and in 1895 reentered the service of the Grand Trunk, filling successively the posts of clerk, bill checker, and, in 1899, operator. During the same year he worked as clerk and operator at Berlin, N. H., Island Pond, Vt., and Sherbrooke, Que., and in 1900 went to Montreal, Que., as clerk in the freight accounts department, becoming ticket clerk at Bonaventure Station in the following year. For eight years Mr. Johnston was excursion clerk in the passenger traffic office of the Grand Trunk Pacific (now Canadian National), and in 1909 he went to Winnipeg, Man., as chief clerk in the passenger traffic office of that road. Returning to Montreal as chief clerk in 1912, he became assistant to the passenger traffic manager two years later, and, in 1915, assistant to the general passenger agent. In 1923, Mr. Johnston was named passenger traffic manager of the Canadian National, being appointed assistant general passenger traffic manager in 1927, and general passenger

traffic manager in 1939. It is from this position that he now retires. Chairman of the executive committee of the Canadian Passenger Association and a past president of the Montreal Traffic Club, Mr. Johnston has also served on important committees of several United States passenger traffic associations.

FINANCIAL, LEGAL AND ACCOUNTING

J. J. Phillips, chief clerk in the claim department of the Illinois Central, with headquarters at Chicago, has been promoted to general claim agent, with headquarters at Memphis, Tenn., succeeding **E. W. Sprague**, whose recent retirement was reported in the *Railway Age* of July 1.

Donald D. Dart has been appointed assistant general counsel of the Delaware & Hudson with headquarters at New York. Born at Salt Lake City, Utah, on November 29, 1908, he attended the University of California and received an LL.D. degree from Fordham University Law School in 1934. Mr. Dart entered the service of the Delaware & Hudson on September 1, 1930, as a law clerk, and was admitted to the bar in New York in 1935. He was appointed assistant to the general counsel on January 15, 1943, continuing in that capacity until his recent advancement to the post of assistant general counsel at New York. Mr. Dart was admitted to practice before the Interstate Commerce Commission in 1935, and has been a member of the bar of the United States district court, southern district of New York, since 1939.

TRAFFIC

E. A. Day has been appointed industrial representative, Atlantic region, of the Canadian National. This is a newly created position.

Roy L. Wyatt, commercial agent of the Great Northern with headquarters at Chicago, has been promoted to general agent with headquarters at St. Louis, Mo., to succeed George C. Malloy, deceased.

J. C. Fulford has been appointed passenger trainmaster of the Southern Ontario district, Canadian National, succeeding **A. Mahon**, who has been named assistant superintendent of that district, with headquarters at Toronto, Ont.

J. B. Williams, traveling freight and passenger agent of the Denver & Rio Grande Western's Omaha, Neb., territory, since 1928, has been appointed general agent of a new Boston agency of the Rio Grande.

S. L. Wright, general agent of the Texas & Pacific, with headquarters at Texarkana, Ark., has been promoted to executive agent, with headquarters at Dallas, Tex. **G. D. Tatum** has been appointed general agent, with headquarters at Alexandria, La., succeeding **H. B. Smith**, who has been transferred to Texarkana, replacing Mr. Wright.

G. H. Dougherty, assistant southern district traffic manager of the Kansas City Southern with headquarters at Shreveport, La., has been promoted to district traffic manager at Washington, D. C., to succeed

E. J. Glaeser, deceased. **H. H. Riddle**, general agent at Lake Charles, La., has been transferred to Houston, Tex., to succeed **R. E. Carter**, promoted and has been succeeded by **E. E. Greeson**, general agent at Little Rock, Ark., who in turn has been succeeded by **L. R. Squire**, traveling freight agent at Chicago.

Leonard Hill, assistant general freight agent of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has been promoted to general freight agent, with headquarters at St. Louis, Mo. **Ernest W. Larsen**, chief clerk to the freight traffic manager at Chicago has been advanced to assistant general freight agent, succeeding Mr. Hill. **C. A. Cromwell**, general agent at Washington, D. C., has been promoted to general eastern freight agent, with headquarters at New York, succeeding **G. W. Stewart**, who has been advanced to general freight agent, with headquarters at Kansas City, Mo. **James N. Hunt**, division freight agent at Dallas, Tex., has been promoted to assistant general freight agent, with headquarters at Des Moines, Iowa, succeeding **J. M. Bann**, who has been advanced to general freight agent, with headquarters at Denver, Colo. **William E. Delaney**, traveling freight agent with headquarters at Phoenix, Ariz., has been promoted to general agent, with headquarters at Duluth, Minn., relieving **Ralph R. Shaeffer**, who has been transferred to Cleveland, replacing **L. L. Thoms**, who succeeds Mr. Campbell at Washington.

ENGINEERING & SIGNALING

C. E. Fisher, inspector of water supply of the Virginian, has been appointed water service engineer, with headquarters at Roanoke, Va.

C. O. Ellis, superintendent of telegraph of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has also been appointed superintendent of communications.

W. H. B. Bevan has been appointed acting district engineer, Montreal, Que., district, of the Canadian National. He relieves **W. Walker**, who is on leave because of illness.

G. C. Blackaller, master carpenter of the Denver & Rio Grande Western, with headquarters at Salt Lake City, Utah, has been promoted to division engineer of the Grand Junction division, with headquarters at Grand Junction, Colo., succeeding **A. L. Kleine**, whose appointment as roadmaster-trainmaster at Gunnison, Colo., is reported elsewhere in these columns.

H. L. McMullin, assistant engineer of water service of the Missouri Pacific, with headquarters at Houston, Tex., has been appointed engineer of water supply of the Texas & Pacific, with headquarters at Dallas, Tex. Mr. McMullin was born at New Boston, Mo., on January 7, 1895, and was graduated from the University of Kansas in 1923. He entered railway service in that year as a water treating plant inspector of the Missouri-Kansas-Texas at Waco, Tex., and in July, 1924, he went with the Missouri Pacific as a chemist, with headquarters at

Little Rock, Ark. On June 1, 1932, Mr. McMullin was transferred to Houston, and on August 1, 1942, he was promoted to engineer of water service, with headquarters at St. Louis, Mo. On March 1, 1944, he was appointed assistant engineer of water service, with headquarters at Houston.

PURCHASES AND STORES

C. S. Argyle, superintendent of stores of the Prince Albert Drydock & Shipyard, Ltd., (a subsidiary of the Canadian National), at Prince Rupert, B. C., has been appointed assistant general storekeeper of the Canadian National, with headquarters at Winnipeg, Man.

MECHANICAL

R. W. Ellis, assistant master mechanic of the Illinois Central with headquarters at Markham (Chicago), Ill., has been promoted to master mechanic with headquarters at Memphis, Tenn., to succeed **A. B. Atkinson** who has been assigned to other duties. **J. M. Jeffrey**, general roundhouse foreman at Chicago succeeds Mr. Ellis.

E. C. Ellis, whose promotion to superintendent car department of the Chesapeake & Ohio, with headquarters at Richmond, Va., was announced in the *Railway Age* of July 8, was born at Huntington, W. Va., and studied at the Virginia Mechanics Institute. He entered Chesapeake & Ohio service at Huntington in 1909 as carman's apprentice, and was promoted to coach carpenter in 1914. Mr. Ellis was transferred in 1921 to the motive power department at Richmond, becoming general passenger car inspector in 1924. Ten years later he was appointed supervisor passenger car maintenance and inspection at Huntington, and was transferred to Richmond in that capacity in 1936. He continued in the post at the latter location until his present appointment as superintendent car department.

OBITUARY

Earl C. Spalding, foreign freight agent, British Columbia district, of the Canadian National, died recently at Vancouver, B. C.

S. J. Miller, who retired as general freight and passenger agent of the Northern Pacific on February 1, 1943, died in Missoula, Mont., on July 8.

C. M. Cobb, who retired in 1940 as superintendent of the Norfolk district, Atlantic Coast Line, died on July 18 at his home in Norfolk, Va. He was 77 years old.

Walter F. Rosette, who retired in 1942 as general freight and passenger agent of the Denver & Rio Grande Western, with headquarters at Grand Junction, Colo., died in a hospital in that city on July 3.

Eugene H. Roy, general superintendent of motive power of the Seaboard Air Line whose death on June 17 was announced in the *Railway Age* of June 24, was born on August 14, 1883, at Winoski, Vt. He entered railway service with the Boston & Maine as a machinist in 1905, later serving in the same position on the Florida & East

Coast. Mr. Roy then joined the Seaboard Air Line, filling successively the positions of machinist, roundhouse foreman, general foreman, master mechanic, general master mechanic, and assistant general superintendent of motive power. On May 18, 1936, he



Eugene H. Roy

became general superintendent of motive power of the Seaboard Air Line at Norfolk, Va., and continued in that position until his death.

William Haywood, freight traffic manager of the Illinois Central, with headquarters at Chicago, died at his home in that city on July 16. Mr. Haywood was born at Lancaster, England, on May 30, 1884. He came to this country and entered railway service in 1901 as a messenger in the office of the traffic manager of the Illinois Central, serving in this position and as secretary to various traffic officers, including the vice-president in charge of traffic, until 1909. At that time he was made secretary to the president, and in 1912 he was appointed chief clerk to the vice-president in charge of traffic, being promoted to assistant general freight agent of the Northern and Western lines five years later. In 1920, Mr. Haywood was further advanced to the position of assistant to the traffic manager and



William Haywood

in 1921 he was made general freight agent in charge of solicitation. Seven years later he was promoted to assistant freight traffic manager at Chicago. In August, 1932, Mr. Haywood was advanced to the position he held at the time of his death.

Operating Revenues and Operating Expenses of Class I Steam Railways

FOR THE MONTH OF MAY, 1944 AND 1943

Item	United States		Eastern District		Southern District		Western District	
	1944	1943	1944	1943	1944	1943	1944	1943
Revenues:								
Miles of road operated at close of month	228,634	229,050	56,104	56,301	43,384	43,431	129,146	129,318
Freight	\$600,068,677	\$573,733,285	\$234,184,647	\$226,475,569	\$115,102,228	\$112,625,427	\$250,781,802	\$234,632,289
Passenger	150,075,682	133,579,807	60,093,903	53,946,547	29,343,731	28,280,356	60,638,048	51,352,904
Mail	10,431,764	10,017,640	3,491,909	3,499,916	1,921,795	1,841,117	5,018,060	4,676,607
Express	11,999,947	9,709,390	3,937,807	2,916,309	1,876,413	1,619,540	6,185,272	5,173,541
All other operating revenues	31,479,552	32,232,450	13,531,872	15,442,039	4,230,602	3,965,495	13,717,078	12,824,916
Railway operating revenues	804,055,622	759,272,572	315,240,138	302,280,380	152,474,769	148,331,935	336,340,715	308,660,257
Expenses:								
Maintenance of way and structures	109,958,452	87,886,832	40,745,446	32,845,218	18,456,959	15,689,594	50,756,047	39,352,020
Depreciation	8,824,048	8,724,024	3,804,155	3,784,434	1,457,878	1,452,395	3,562,015	3,487,195
Retirements	2,091,768	346,524	885,275	66,691	120,563	33,847	1,085,930	245,986
Deferred maintenance	*791,485	*150,383	*144,595	*23,792	.....	.....	*646,890	*126,591
Amortization of defense projects	1,709,330	766,399	523,047	239,305	320,425	154,749	865,858	372,345
Equalization	*1,918,560	*236,289	*1,662,691	*737,736	19,749	313,343	*275,618	188,104
All other	100,043,351	78,436,557	37,340,255	29,516,316	16,538,344	13,735,260	46,164,752	35,184,981
Maintenance of equipment	134,356,641	115,669,831	56,377,557	49,132,243	25,471,176	22,504,888	52,507,908	44,032,700
Depreciation	17,932,207	17,626,773	7,582,091	7,496,182	3,566,859	3,568,046	6,783,257	6,562,545
Extraordinary retirements	2,328	.....	2,328	.....	.....	.....	.....	.....
Deferred maintenance and major repairs	*222,879	62,494	2,395	.....	.....	*7,037	*225,274	69,531
Amortization of defense projects	13,717,412	10,238,546	4,512,935	3,697,605	3,508,228	2,548,140	5,696,249	3,992,801
Equalization	5,471	337,302	19,827	245,465	29,572	91,969	15,216	*132
All other	102,922,102	87,404,716	44,257,981	37,692,991	18,425,661	16,303,770	40,238,460	33,407,955
Traffic	11,276,190	10,590,444	4,063,621	3,932,848	2,067,210	2,037,701	5,145,359	4,619,961
Transportation—Rail line	244,755,639	217,155,930	108,910,499	97,250,723	41,888,147	38,548,408	93,956,993	81,356,799
Transportation—Water line	822	*13	.....	.....	.....	822	.....	*13
Miscellaneous operations	9,827,307	8,505,069	3,497,804	3,071,989	1,624,120	1,379,354	4,705,383	4,053,726
General	16,592,202	14,518,975	6,619,113	5,744,190	3,210,284	2,954,756	6,762,805	5,820,029
Railway operating expenses	526,767,253	454,327,068	220,214,040	191,977,205	92,717,896	83,114,701	213,835,317	179,235,162
Net revenue from railway operations	277,288,369	304,945,504	95,026,098	110,303,175	59,756,873	65,217,234	122,505,398	129,425,095
Railway tax accruals	161,678,152	159,261,536	51,696,934	54,522,261	37,425,690	38,642,200	72,555,528	66,097,075
Pay-roll taxes	19,401,045	16,756,827	8,091,432	7,116,503	3,385,667	3,054,680	7,923,946	6,585,644
Federal income taxes†	116,303,951	117,267,651	32,552,732	36,237,870	28,741,970	30,741,016	55,009,249	50,288,765
All other taxes	25,973,156	25,237,058	11,052,770	11,167,888	5,298,053	4,846,504	9,622,333	9,222,666
Railway operating income	115,610,217	145,683,968	43,329,164	55,780,914	22,331,183	26,375,034	49,949,870	63,328,020
Equipment rents—Dr. balance	13,373,324	12,614,112	6,039,585	5,334,334	1,100,785	1,068,841	6,232,954	6,210,937
Joint facility rent—Dr. balance	3,731,681	3,591,740	1,681,049	1,806,769	415,632	420,331	1,635,000	1,364,640
Net railway operating income	98,505,212	129,478,116	35,608,530	48,639,811	20,814,766	25,085,862	42,081,916	55,752,443
Ratio of expenses to revenues (per cent)	65.5	59.8	69.9	63.5	60.8	56.0	63.6	58.1

FOR FIVE MONTHS ENDED WITH MAY, 1944 AND 1943

Item	United States		Eastern District		Southern District		Western District	
	1944	1943	1944	1943	1944	1943	1944	1943
Revenues:								
Miles of road operated at close of month	228,733	229,198	56,112	56,351	43,385	43,458	129,236	129,389
Freight	\$2,857,975,300	\$2,756,462,621	\$1,118,051,506	\$1,091,226,210	\$559,441,467	\$551,861,066	\$180,482,327	\$1,113,375,345
Passenger	720,413,627	601,887,569	283,711,315	239,369,310	146,057,519	129,460,121	290,644,793	233,058,138
Mail	51,611,339	49,062,632	17,206,180	17,240,895	9,781,630	8,839,178	24,623,529	22,982,559
Express	60,614,804	51,436,970	20,497,885	18,325,382	10,015,573	8,806,743	30,101,346	24,304,845
All other operating revenues	145,981,108	140,159,478	62,587,651	62,698,928	20,727,499	19,033,982	62,665,958	58,426,568
Railway operating revenues	3,836,596,178	3,599,009,270	1,502,054,537	1,428,860,725	746,023,688	718,001,090	1,588,517,953	1,452,147,455
Expenses:								
Maintenance of way and structures	494,104,131	396,852,919	187,275,844	152,988,796	86,659,206	72,975,312	220,169,081	170,888,811
Depreciation	44,086,335	44,017,520	19,037,733	18,969,734	7,284,134	7,338,295	17,764,468	17,709,491
Retirements	5,577,728	996,120	1,989,365	316,728	427,440	139,985	3,160,923	539,407
Deferred maintenance	*2,677,627	*352,612	*466,516	*123,289	.....	.....	*2,211,111	*229,323
Amortization of defense projects	7,251,817	3,391,069	2,378,956	1,050,447	1,288,306	638,364	3,584,555	1,702,258
Equalization	14,403,654	15,620,993	6,949,777	6,427,577	2,502,006	4,506,364	4,951,871	4,687,052
All other	425,462,224	333,179,829	157,386,529	126,347,599	75,157,320	60,352,304	192,918,375	146,479,926
Maintenance of equipment	653,498,712	557,236,181	274,830,590	240,934,774	121,907,275	105,511,844	256,760,847	210,789,563
Depreciation	88,501,622	88,008,317	37,415,666	30,997,741	17,760,485	17,915,988	33,325,471	33,094,588
Extraordinary retirements	2,328	.....	2,328	.....	.....	.....	.....	.....
Deferred maintenance and major repairs	*666,431	444,644	13,939	18,283,159	17,319,315	*26,288	*680,370	470,932
Amortization of defense projects	66,516,176	48,279,499	21,960,012	18,283,159	12,122,635	12,236,849	17,873,705	17,703,705
Equalization	430,914	843,569	66,764	363,088	237,558	379,649	126,592	100,832
All other	498,714,103	419,660,152	215,371,881	185,290,786	86,589,917	75,119,860	196,752,305	159,249,506
Traffic	54,952,584	51,126,579	19,896,855	18,696,339	9,881,862	9,855,331	25,173,867	22,574,909
Transportation—Rail line	1,224,925,918	1,059,791,249	550,461,165	482,094,137	207,468,242	182,910,199	466,996,511	394,786,913
Transportation—Water line	2,001	4,279	.....	.....	.....	2,001	4,279	.....
Miscellaneous operations	48,905,344	41,033,907	17,227,346	14,858,646	8,201,421	6,830,984	23,476,577	19,344,277
General	82,922,628	72,421,895	33,431,361	29,608,984	15,845,816	14,175,431	33,645,451	28,637,480
Railway operating expenses	2,559,311,318	2,178,467,009	1,083,123,161	939,181,676	449,963,822	392,259,101	1,026,224,335	847,026,232
Net revenue from railway operations	1,277,284,860	1,420,542,261	418,931,376	489,679,049	296,059,866	325,741,989	562,293,618	605,121,223
Railway tax accruals	744,940,304	739,047,887	220,101,740	242,445,004	185,725,136	192,694,590	339,113,428	303,908,293
Pay-roll taxes	95,423,856	80,441,625	40,277,521	34,520,399	16,790,208	14,292,182	38,356,127	31,629,044
Federal income taxes†	524,948,855	538,253,790	128,227,730	136,221,802	143,154,213	153,871,012	253,521,912	228,160,976
All other taxes	124,567,593	120,352,472	51,551,489	51,702,803	25,780,715	24,531,396	47,235,389	44,118,273
Railway operating income	532,344,556	681,494,374	198,829,636	247,234,045	110,334,730	133,047,399	223,180,190	301,212,930
Equipment rents—Dr. balance	63,398,178	61,209,360	29,573,862	25,419,700	4,491,345	5,107,137	29,332,971	30,682,523
Joint facility rent—Dr. balance	17,363,939	17,071,886	8,384,713	8,648,557	1,938,989	2,017,531	7,040,237	6,405,798
Net railway operating income	451,582,439	603,213,128	160,871,061	213,165,788	103,904,396	125,922,731	186,806,982	264,124,609
Ratio of expense to revenues (per cent)	66.7	60.5	72.1	65.7	60.3	54.6	64.6	58.3

* Decrease, deficit, or other reverse items.

† Includes income tax, surtax, and excess-profits tax.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

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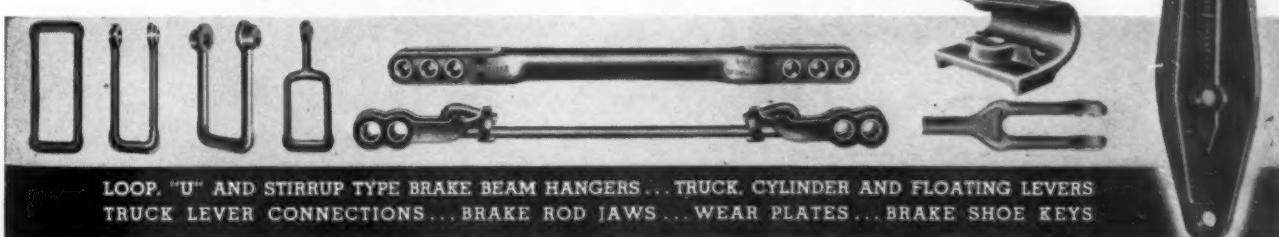
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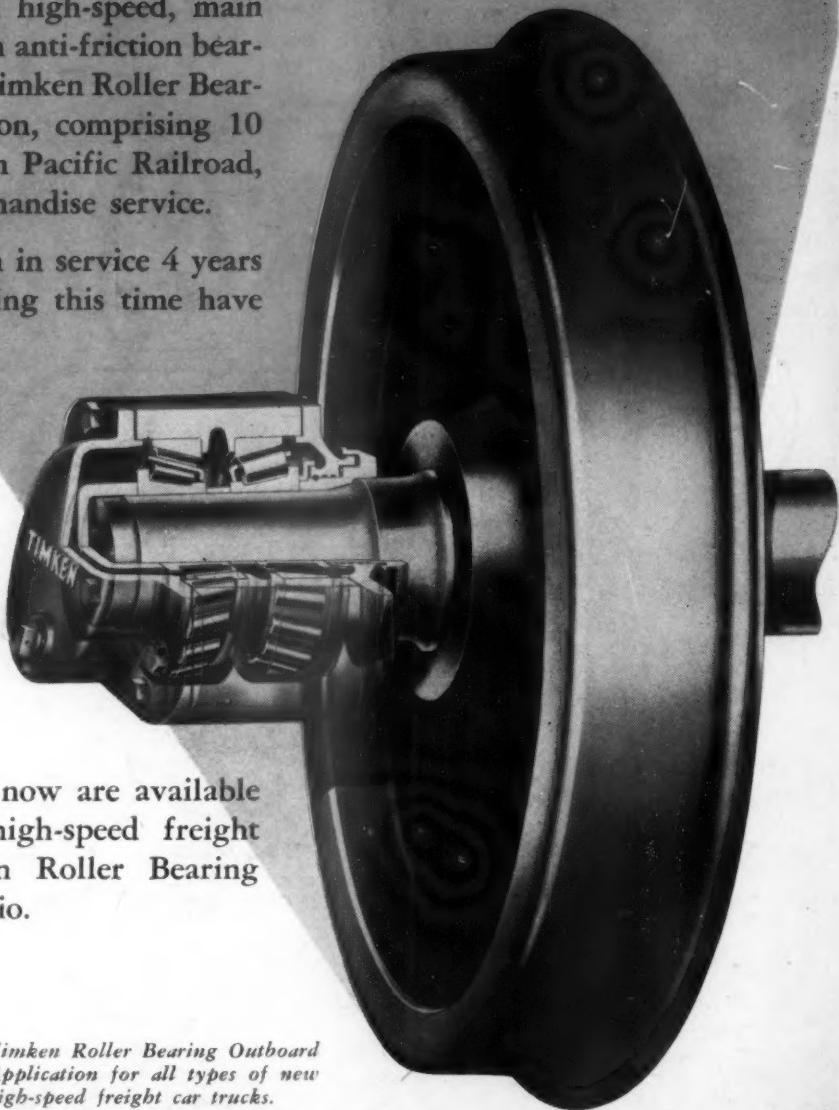
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